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THE AMERICAN MEDICAL MONTHLY.

JULY, 1858.

ESSAYS, MONOGRAPHS, AND CASES.

Anatomy of the Placenta. By JOHN C. DALTON, M.D., Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons of New York.

The object of the present paper is to demonstrate, by positive evidence, some points in the anatomy of the placenta which are still in dispute. It is more particularly with regard to the precise mode of vascular connection existing between the placenta and the uterus, that there are some discrepancies among the anatomists of the present day; and I shall now ask the attention of the Academy to the result of certain experiments which I have recently performed, and which seem to leave no doubt with regard to the real nature of this connection.

Ever since the time of the Hunters, it has been believed by many that the blood-vessels of the uterus were directly prolonged into the substance of the placenta. William Hunter, with the assistance of his brother John, injected, in several instances, the vessels of the pregnant uterus with wax, and found, that although none of the injection passed into the vessels of the umbilical cord, it nevertheless found its way freely into the interior of the placenta. To use his own words, "the cells or interstices in the spongy portion of the pla-

centa were universally loaded with wax; either the blue, which was injected into the veins of the womb, or the red, which was thrown into the arteries."

He also says: "Most of the wax, which was first injected by the veins of the womb, was driven on toward the internal surface (of the placenta); and the red wax, which was afterward injected by the arteries, was lodged, principally, in the outer parts; but the two colors were more or less blended through the whole."

These injections are represented in Hunter's plates of the gravid human uterus, number five and number twenty-four.

In 1833, Mr. Mayo and Mr. Stanley, of London, examined some of Hunter's injected preparations of the placenta, preserved in the Museum of the Royal College of Surgeons, and made a report of their examination in the *London Lancet* for June 22d of the same year. They found that the umbilical arteries had been injected in yellow, the uterine arteries in red, and the uterine veins in black; and that the injection of the uterine vessels had evidently passed into the whole thickness of the placenta.

About the year 1832, Prof. Weber, of Leipzig, also made a double injection of the uterus and placenta, filling the substance of the placenta with colored wax from the uterine vessels. This specimen is still preserved in Prof. Weber's Museum, connected with the Medical School of Leipzig.

The above are the only instances, so far as I am aware, in which such injections have been made, since the commencement of the present century. They led to the belief, among a certain number of the profession, that the maternal and fœtal vessels were intermingled in the placenta—the injection in both instances being supposed to have followed the natural course of the blood. They were not, however, universally regarded as conclusive, and very different views have been since maintained on this point by men of the first eminence in the profession.

Dr. Robert Lee, in the *London Lancet* for April 20th, 1833, published an account of some dissections which he made of pregnant uteruses under water, from which he derives the conclusion that there is no such penetration of the uterine vessels into the placenta, imagined by the Hunters and by Prof. Weber. He regards the filling of the placenta in these instances by the wax injection as entirely an effect of extravasation; and maintains that the sinuses of the uterus do not penetrate beyond the uterine or decidual surface of the placenta.

"When air," he says, "is forcibly thrown either into the spermatic

arteries or veins, the whole inner membrane of the uterus is raised by it; but none of the air passes across the deciduous membrane into the placenta, nor does it escape from the semilunar openings in the inner membrane of the uterus, until the attachment of the deciduous membrane to the uterus is destroyed. There are no openings in the deciduous membrane corresponding with those valvular apertures now described in the internal membrane of the uterus."

I would ask attention more particularly to the above statements of Dr. Lee, as to the non-injection of air from the uterus to the placenta, since they are in direct opposition with the results of my own experiments, to be described presently.

Dr. Lee goes on to say, "the facts which have now been stated warrant, I think, the conclusion that the human placenta does not consist of two parts, maternal and foetal; that no cells exist in its substance, and that there is no communication between the uterus and the placenta by large arteries and veins."

Dr. John Reid, on the other hand, in 1841 published* an elaborate account of the dissection of a pregnant uterus, with the placenta attached, in which he comes to an opposite conclusion, and maintains that the uterine vessels not only penetrate into the placenta, but extend throughout its entire thickness, enveloping everywhere the foetal tufts. He was first led to adopt this view, by noticing that some of the placental tufts extended entirely through the decidual surfaces of the placenta, and projected more or less into the sinuses in the muscular walls of the uterus. No injection was practised by Dr. Reid, excepting that of the umbilical arteries, for the purpose of ascertaining the arrangement of vessels in the foetal tufts, and his conclusions with regard to the disposition of the maternal sinuses on the placenta were derived altogether from careful dissection. He accordingly speaks of his results with a considerable degree of confidence, though not, as we shall see, with absolute certainty.

"The outer surface of the placental vessels," he says, "has a smooth appearance, and they are, *we may suppose*, everywhere enveloped in the inner coat of the vascular system of the mother, which, as we have seen above, is reflected upon them." "The interior of the placenta is thus composed of numerous trunks and branches, (each including an artery and an accompanying vein,) every one of which, we believe, is closely ensheathed in prolongations of the inner coat of the vascular system of the mother, *or at least in a membrane continuous with it*. If we adopt this view of the structure of the placenta," he

* Edinburgh Medical and Surgical Journal, January, 1841.

goes on to say, "the inner coat of the vascular system of the mother is prolonged over each individual tuft, so that when the blood of the mother flows into the placenta through the curling arteries of the uterus, it passes into a large sac formed by the inner coat of the vascular system of the mother, which is intersected in many thousands of different directions, by the placental tufts projecting into it like fringes, and pushing its thin wall before them in the form of sheaths, which closely envelope both the trunk and each individual branch comprising these tufts. From this sac the maternal blood is returned by the utero-placental veins without having been extravasated or without having left her own system of vessels."

In 1845, Prof. John Goodsir, of Edinburgh, corroborated Dr. Reid's views, by the results of microscopic examination of the substance of the placenta and decidual membrane;* and since that time these views have been received with more general favor by the profession than those of an opposite character.

Very recently, however, they have been again denied *in toto* by an observer of at least equal eminence with those already mentioned. M. Ch. Robin, of Paris, has published in the first number of the Journal of Physiology, conducted by M. Brown-Séquard, a paper entitled *Anatomy and Physiology of the Uterine Mucous Membrane, and its Epithelium during Gestation*, in which he maintains that the maternal sinuses cease at the uterine surface of the placenta, and do not penetrate into its substance. "There are no other utero-placental vessels existing," he says, "than those which are contained in the folds or processes of the uterine mucous membrane dipping down, in the mammalian animals above mentioned, into the spaces between the villousities of the chorion; and in the human subject, into the shallow furrows between the lobules of the placenta."

M. Robin also attributes, like Dr. Lee, all the instances of injections of the placenta from the uterine vessels to a rupture of the latter and consequent extravasation, the ruptures being, as he says, easily detected where they exist.

M. Robin occupies, as I have already intimated, the very first rank among physiologists and minute anatomists at the present day. I do not say this for the purpose of adding anything to his reputation, but merely in order to show that I appreciate fully the weight of his opinion, and that I should not maintain views directly opposed to his, as I shall do in the present paper, without having been personally convinced upon testimony of the most complete and satisfactory nature.

* British and Foreign Medical Review, October, 1845.

I feel confident, indeed, from the facts which I shall immediately mention, that the blood-vessels of the uterus *do* really penetrate into the substance of the placenta, as supposed by the Hunters, Dr. Reid, and Prof. Goodsir, and that they constitute, with the tufts of the foetal chorion, an equal part of its mass.

The placenta is, therefore, a double organ, partly maternal and partly foetal; and, in order to arrive at a distinct understanding of the arrangement of its vessels, I will first go through with a hasty description of the development of the two structures which enter principally into its formation, viz: First, the chorion of the foetus, and secondly, the decidual membrane of the uterus.

I.—*Of the Chorion.* The external investing membrane of the egg as it comes from the ovary, is at first perfectly smooth. But after the formation of the chorion, and particularly after the blood-vessels of the allantois begin to extend into it, it becomes shaggy. Its exterior is seen to be covered with little transparent prominences, like so many villi, which increase the extent of its surface, and assist in the absorption of fluids from without. The villi are, at this time, quite simple in form, and homogeneous in structure.

As the egg increases in size, these villi rapidly elongate, and become, at the same time, divided and ramified by the repeated budding and sprouting of lateral off-shoots from every part. After this process of growth has gone on for some time, the external surface of the chorion presents a uniformly velvety or shaggy appearance, owing to its being covered everywhere with these tufted and compound villosities.

The villosities themselves, when examined by the microscope, have an exceedingly well-marked and characteristic appearance. They originate from the surface of the chorion by a somewhat narrow stem, and divide into a multitude of secondary and tertiary branches of varying size and figure; some of them slender and filamentous, others club-shaped, many of them irregularly swollen at various points. All of them terminate by rounded extremities, giving to the whole tuft a certain resemblance under the microscope to some kinds of sea-weed. The larger trunks and branches of the villosity are seen to contain numerous rounded or oval nuclei, imbedded in a nearly homogeneous or finely granular substratum. The smaller villosities appear, under a low magnifying power, simply granular in texture.

While the villosities just described are in process of formation, the allantois itself has completed its growth, and has become converted into a permanent chorion. The blood-vessels coming from the umbil-

ical arteries accordingly ramify over the chorion, and supply it with a tolerably abundant vascular net-work. These vessels penetrate also into the substance of the villositities. They enter the base or stem of each tuft, and, following every division of its compound ramification, they reach, at last, its rounded extremities. Here they turn upon themselves in loops, and retrace their course, to unite finally with the venous branches which empty into the umbilical vein.

Afterward, the chorion, which is, at the period above described, uniformly villous, shaggy, and vascular, becomes, in the progress of its development, partially bald. This change, which begins to take place about the end of the second month, commences at a point opposite the situation of the fœtus—and the insertion of the umbilical cord. The villositities in this region cease growing, and as the entire egg continues to enlarge, the villositities at the point indicated fail to keep pace with its growth and with the progressive expansion of the chorion. They accordingly become, at this point, thinner and more scattered, leaving that part of the surface of the chorion comparatively smooth and bald. This baldness increases in extent, and becomes more and more complete, spreading and advancing over the adjacent portions of the chorion, until at least two-thirds of its surface have become nearly or quite destitute of villositities.

At the opposite portion of the egg, at the same time, that portion, namely, which corresponds with the insertion of the umbilical cord, the villositities, instead of becoming atrophied, continue to grow, and this part of the chorion becomes constantly more shaggy and thickly set than before. The consequence is, that the chorion afterward presents a very different appearance at different portions of its surface. The greater part is smooth, but a certain portion, constituting about one-third of the whole, is covered with a soft and spongy mass of long, thickly set, compound villositities. It is this thickened and shaggy portion which is afterward concerned in the formation of the placenta; while the remaining smooth portion continues to be known under the name of the chorion.

The vascularity of the chorion keeps pace in its different parts respectively with the atrophy and development of its villositities. As the villositities shrivel and disappear over a part of its extent, the looped capillary vessels, which they at first contained, disappear also, so that the smooth portion of the chorion shows afterwards only a few straggling vessels running over its surface, and does not contain any abundant capillary plexus. In the thickened portion, on the other hand, the vessels lengthen and ramify to an extent corresponding with the

villosities in which they are situated. The umbilical arteries, coming from the abdomen of the fœtus, enter the villi and penetrate through their whole extent, forming at the placental portion of the chorion a mass of tufted and ramified vascular loops; while over the rest of the membrane they are merely distributed as a few single and scattered vessels.

II.—*Of the Decidua.* The decidua, which constitutes at first the remaining portion of the placenta, is nothing more than the mucous membrane of the body of the uterus. This membrane in the unimpregnated condition is soft and delicate in texture, and presents a smooth and slightly vascular internal surface. It consists throughout of minute glandular tubules, ranged side by side, and running perpendicularly to the free surface of the mucous membrane, occupying its entire thickness, and resting by their rounded extremities upon the subjacent muscular tissues; while their mouths open into the cavity of the uterus. A few fine blood-vessels penetrate the mucous membrane from below, and, running upward between the tubules, encircle their superficial extremities with a capillary net-work. There is no areolar tissue in the uterine mucous membrane, but only a small quantity of spindle-shaped fibro-plastic fibres, scattered between the tubules.

As the fecundated egg is about to descend into the cavity of the uterus, the mucous membrane, just described, takes on an increased activity of growth. It becomes tumefied and congested; and as it increases in thickness, it projects in rounded eminences or convolutions into the uterine cavity. The tubules increase in size, and the blood-vessels of the mucous membrane at the same time enlarge and multiply, and inosculate freely with each other; so that the vascular net-work encircling the tubules becomes more extensive and abundant.

The internal surface of the uterus, therefore, after this process has been for some time going on, presents a thick, rich, soft, vascular and velvety lining, which is the decidua, and which is thrown into abundant projecting folds and convolutions.

As the fecundated egg, in its journey from above downward, passes the lower orifice of the fallopian tube, it insinuates itself between the opposite surfaces of the uterine mucous membrane, and becomes soon afterwards lodged in one of the furrows or depressions between the projecting convolutions of the decidua. It is at this situation that an adhesion will subsequently take place between the external membrane of the egg on the one hand, and the uterine decidua on the other. At the point where the egg becomes fixed and entangled in this manner, a still more rapid development than before takes place in the uterine

mucous membrane. Its projecting folds begin to grow up around the egg, and enveloping it more and more, at last close together over its most prominent portion, enclosing it in this way in the decidua reflexa.

Let us now see in what manner the egg becomes attached to the decidual membrane. While the changes just noticed are taking place in the walls of the uterus, the growth of the egg and the development of the chorion have been going on simultaneously. The projecting filaments or villousities of the chorion, which are at first solid and non-vascular, insinuate themselves as they grow, either into the uterine tubules or between the folds of the decidual surface with which the egg is in contact, penetrating in this way into little cavities or follicles of the uterine mucous membrane. When the formation of the decidua reflexa is completed, the chorion has already become uniformly shaggy, and its villousities, spreading in all directions from its external surface, penetrate everywhere into the follicles just described. In this way the egg becomes entangled with the decidua—both decidua vera and decidua reflexa, throughout the whole extent of its surface.

Soon afterward the umbilical vessels, which emerge from the body of the foetus to ramify in the chorion, penetrate everywhere into the villousities of that membrane, and become fully developed. Each villosity of the chorion then, as it lies imbedded in its uterine follicle, contains a vascular loop, through which the foetal blood circulates, increasing in this way the activity of absorption and exhalation.

Subsequently, as we have seen, these vascular tufts, which are at first uniformly abundant throughout the whole extent of the chorion, disappear over a portion of its surface; while at the same time they become concentrated, and still further developed at a particular spot, the situation of the future placenta. This is the spot at which the egg is in contact with the decidua vera. Here, therefore, both the decidual membrane and the tufts of the chorion continue to increase in thickness and vascularity; while elsewhere, over the prominent portion of the egg, the chorion not only becomes bare of villousities and comparatively destitute of vessels, but the decidua reflexa, which is in contact with it, also loses its activity of growth, and becomes expanded into a thin layer, nearly destitute of vessels, and without any remaining trace of tubules or follicles.

The placenta accordingly is formed by the continued growth at one particular spot of the villi of the chorion, and the follicles of the decidua. The uterine follicle, into which the villus has penetrated, enlarges to a similar extent with the latter, sending out branching diverticula, corresponding with the multiplied ramifications of the villus. In fact,

the growth of the follicle and that of the villus go on simultaneously, and keep pace with each other; the latter constantly advancing as the cavity of the former enlarges.

But it is not only the *follicles* of the uterine mucous membrane which increase in size at this period. The capillary blood-vessels, which lie between them and ramify over their exterior, also become unusually developed. They enlarge and inosculate more freely with each other, so that every uterine follicle is soon covered with an abundant net-work of dilated capillaries, derived from the blood-vessels of the original decidua. At this time, therefore, each vascular loop of the foetal chorion is covered first with a layer forming the wall of the villus. This is in contact with the lining membrane of the uterine follicle, and outside of this again are the capillary vessels of the uterine mucous membrane; so that two distinct membranes intervene between the walls of the foetal capillaries on the one hand, and those of the maternal capillaries on the other; and all transudation must take place not only through the walls of the vessels, but also through the substance of these two membranes intervening between them.

As the formation of the placenta goes on, the general anatomical arrangement of the foetal vessels remains the same. These vessels continue to form vascular loops, penetrating deeply into the substance of the decidua; only they become constantly more elongated, and their ramifications more abundant and tortuous.

The maternal capillaries, however, situated on the outside of the uterine follicles, become considerably altered in their anatomical relations. They enlarge excessively, and, by encroaching constantly upon the little islets or spaces between them, fuse successively with each other; and, losing gradually in this manner the characters of a capillary net-work, become dilated into wide sinuses, which communicate freely with the enlarged vessels of the muscular walls of the uterus. As the original capillary plexus occupied the entire thickness of hypertrophied decidua, the vascular sinuses into which it is thus converted are equally extensive. They commence at the inferior surface of the placenta, where it is in contact with the muscular walls of the uterus, and extend through its whole thickness, quite up to the surface of the foetal chorion.

As the maternal sinuses grow upward, the vascular tufts of the chorion grow downward, and extend also through the entire thickness of the placenta. At this period the development of the blood-vessels, both in the foetal and maternal portions of the placenta, becomes so extensive that all the other tissues which originally co-existed with

them fall into a retrograde condition, and disappear almost altogether. The villousities of the chorion are now hardly anything more than ramified and tortuous vascular loops; the remaining substance of the villus having been atrophied and absorbed in the excessive growth of the blood-vessels. The uterine follicles have at the same time lost all trace of their original structure, and have become mere vascular sinuses, into which the tufted foetal blood-vessels project, with all their compound divisions and ramifications.

Finally, the walls of the foetal blood-vessels having come into close contact with those of the maternal sinuses, become adherent to them and fuse with their substance, so that the two can no longer be separated without lacerating either the one or the other, owing to this secondary union and adhesion which has taken place between them.

The placenta, then, when perfectly formed, has the following structure:



At *a.a.* is seen the chorion receiving the umbilical vessels from the body of the foetus through the umbilical cord, and sending out its compound and ramified vascular tufts into the substance of the placenta. At *b.b.* is the attached surface of the decidua, or uterine mucous membrane; and at *c.c.c.c.* are the orifices of uterine vessels which penetrate it from below. These vessels enter the placenta in an extremely oblique direction, though they are represented in the diagram, for the sake of distinctness, as nearly perpendicular. When they have once penetrated, however, the lower portion of the decidua, they immediately dilate into the placental sinuses, which extend through the en-

tire thickness of the organ, closely embracing all the ramifications of the foetal tufts.

The placenta, accordingly, when arrived at this stage of development, is composed essentially of nothing but blood-vessels. No other tissues enter into its structure; for all those which it originally contained have disappeared, excepting the blood-vessels of the foetus, entangled with and adherent to the blood-vessels of the mother.

There is, of course, no direct communication between the cavities of the maternal and foetal vessels. The blood of the foetus is always separated from the blood of the mother by a membrane which has resulted from the union and successive fusion of four different membranes, as already described, viz: first, the membrane of the foetal villus; secondly, that of the uterine follicle; thirdly, the wall of the foetal blood-vessels; and fourthly, the wall of the uterine sinus. This membrane, however, is extremely thin. If a villus from the foetal portion of the placenta be examined by transparency in the fresh condition, it will be seen that its blood-vessels are covered with a layer of homogeneous or finely granular material, 1-3500 of an inch in thickness, in which are imbedded small oval-shaped nuclei, similar to those seen at an earlier period in the villosities of the chorion. This layer is all that intervenes between the foetal blood in the tufts of the chorion and the maternal blood in the placental sinuses. It is of enormous extent, owing to the extremely abundant branching and subdivision of the double vascular system which is thus formed. The vascular tufts, accordingly, in which the blood of the foetus circulates, are bathed everywhere in the placental sinuses with the blood of the mother; and the processes of endosmosis and exosmosis of exhalation and absorption may go on between the two with the greatest possible activity.

It is very easy to demonstrate the arrangement of the foetal tufts in the human placenta. They can be readily seen by the naked eye; and may be easily traced from their attachment at the under surface of the chorion to their termination near the uterine surface of the placenta. The anatomical disposition of the placental sinuses is, however, much more difficult of examination. During life, and while the placenta is still attached to the uterus, they are filled, of course, with the blood of the mother, and occupy fully one-half the entire mass of the placenta. But when the placenta is detached, the maternal vessels belonging to it are torn off at their necks, *c. c. c. c.*; and the sinuses, being then emptied of blood, collapse, and are apparently obliterated; and the foetal tufts falling together, and lying in contact with each other, appear to constitute the whole of the placental mass. The

existence of the placental sinuses, however, and their true extent, may be satisfactorily demonstrated in the following manner.

If we take the uterus of a woman who has died undelivered at the full term, or thereabouts, and open it in such a way as not to wound the placenta, this organ will be seen remaining attached to the uterine surface, with all its vascular connections complete. Let the foetus now be removed by dividing the umbilical cord, and the uterus, with the placenta attached, placed under water with its internal surface uppermost. We then see the foetal surface of the placenta formed by the chorion, and covered still by the thin and transparent amnion. The amnion should next be removed, which can readily be done by gently detaching it from the surface of the chorion. If the end of a blow-pipe be now introduced into one of the divided vessels of the muscular walls of the uterus, and air forced in by gentle insufflation, we can easily inflate, first the venous sinuses of the uterus itself, and next the deeper portions of the placenta; and lastly, the bubbles of air insinuate themselves everywhere between the foetal tufts, and appear in the most superficial portions of the placenta, immediately underneath the transparent chorion. If the chorion be now divided at any point by an incision, passing merely through its own thickness, the air, which was confined beneath it in the placental sinuses, will escape, and rise in bubbles to the surface of the water. Such an experiment shows conclusively that the placental sinuses communicate freely with the uterine vessels, occupy the entire thickness of the placenta, and are equally extensive with the tufts of the foetal chorion.

It is unnecessary to say that none of the air thus injected finds its way into the umbilical vessels.

I have now had the opportunity of doing this experiment with the results just described, on four different occasions since 1853. The first two cases occurred at Bellevue Hospital, in patients who had died of acute disease in the last stages of pregnancy. The third case was that of a woman who died undelivered, owing to hæmorrhage from placenta previa, at the end of the seventh month. The fourth was that of a woman who died of puerperal convulsions at the full term. The examinations were made at different times, in the presence of Dr. C. R. Gilman, Dr. Geo. T. Elliott, Dr. Henry B. Sands, Dr. F. J. Bumstead, Dr. Wm. H. Draper, Dr. Henry D. Noyes, Dr. T. C. Finnell, and Dr. J. W. S. Gouley, all of whom I believe were satisfied in every respect with the result of the experiment, and convinced of the existence of the placental sinuses, and of their free communication with the vessels of the uterus.

The method of injecting which I have now described has many advantages over that adopted by the Hunters and Prof. Weber.

In the first place, in order to demonstrate a doubtful anatomical point by means of injections, it is extremely desirable that the part to be injected should be freely exposed, and under the eye of the experimenter while the injection is going on. The progress of the operation can then be carefully watched, the amount of force used properly graduated, and the injection terminated as soon as the desired information has been obtained. Every one, I think, who is practically familiar with injections, will appreciate these advantages. But when the pregnant uterus is injected with wax, in the unopened condition, by the spermatic arteries or veins, the injection is made to a certain extent blindfold. We do not know when it is sufficiently complete, we cannot watch its successive stages, and any extravasations which occur may increase to any extent without being discovered. On this account, therefore, the injection by wax is both more difficult and less satisfactory than the one adopted in the above experiments.

In the second place, the injection of air in the manner above described is infinitely less liable than the other to mislead by producing extravasations. This, it will be remembered, is the great objection urged against the results obtained by Weber and the Hunters. It is said that their wax injections penetrated into the placenta by rupture of the uterine vessels, and the difference of opinion on this point shows that it is not easy to decide, from the appearance of the hardened specimen, whether the wax which has been injected be really contained in the cavity of vascular canals, or infiltrated between the tissues of the organs.

In the experiments detailed above, however, it will be recollected by those who were present, how very moderate was the force required to make the air pass from the uterus into the placenta, and even to penetrate quite up to the under surface of the chorion. The elasticity of the air, also, makes it much less likely to cause laceration of the vessels, than the liquid and incompressible wax. Furthermore, the body of the uterus being opened, in order to expose its internal surface, very many of its own vessels were necessarily divided; and the air, during its injection, bubbles out freely at numerous points from the orifices of divided uterine vessels, showing that no undue pressure can be exerted upon the walls of the vessels in its interior. In fact, no doubt can rest upon the mind after performing an injection in this manner, that the air does really follow the course of the vascular canals; and that when it penetrates into the placenta, and inflates its

entire thickness, it is still contained in natural cavities, continuous with those of the matured vessels.

Let us now see what evidence can be gathered of the anatomical arrangement just described, from the placenta as ordinarily expelled after parturition.

If the under surface of the placenta be examined after its detachment from the uterus, it will be found to present a lobulated appearance, owing to the existence of flattened rounded prominences, separated from each other by shallow furrows. Its surface is formed by a soft, whitish, opaque layer, about one-tenth of a line in thickness, which conceals from view the foetal tufts, and which is continuous, at the edges of the placenta, with the uterine decidua adhering to the external surface of the chorion. This layer is, indeed, a part of the decidua. It is the layer sometimes spoken of as "interposed" between the uterus and the placenta, though, in reality, a part of the placenta itself; and it is through it that the utero-placental vessels penetrate to expand into the placental sinuses.

These vessels penetrate, however, in such an extremely oblique direction, that their orifices may easily be overlooked; and it is on this account that it has been denied, by some authorities, that any openings are to be seen on the surface of the detached placenta, corresponding with the mouths of the lacerated uterine sinuses. These orifices, however, do exist, and may be seen by careful inspection. They are to be found more particularly in the furrows between the lobules of the placenta, and lead into the placental sinuses sometimes by a rather long and very oblique passage. They sometimes present themselves as rounded or oval openings, having but one well-defined crescentic edge, and blocked by the end of a foetal tuft, which sometimes even projects a little from the orifice, owing to the empty and collapsed condition of the maternal sinus. These openings are very numerous, also, in the terminal sinus which runs round the borders of the placenta, and from which the air easily penetrates into its central portions.

The placenta, accordingly, is a double organ, formed partly by the chorion and partly by the decidua; and consisting of maternal and foetal vessels, inextricably entangled and united with each other.

A Case of Ovariotomy successfully performed. By ROBERT NELSON, M. D., New York.

Madame L—— B——, 21 years of age, tall and genteel looking, sought my advice in June, 1854, believing herself to be in the eleventh month of her pregnancy, saying also, that such was the opinion

of her medical attendant and his consultants. On a superficial examination a slight fluctuation was perceptible, and a few replies to questions sufficed to show that her tumefaction was due to a right ovarian enlargement. This I told her, but she refused to believe me, left me dissatisfied, and took fresh advice, the same as before. A few months passed on, and she continued to enlarge, the abdomen augmented much in size, the lower part of the thorax rose high, by the tumor encroaching upon that cavity, crowding the diaphragm high up, and causing much dyspnœa. Although her appetite was good, so compressed was the stomach, that at last she eat only one meal a day, became lean and pale. It now became evident to herself that she could not live many months longer, and therefore she solicited me to do what I might think best for her, even if death should follow my means; for she became convinced in her own mind that it was better to risk an operation, even if followed by death in a few days, than to abstain from it, and linger on a few months of life with gradually increasing sufferings, to ultimately end in death. She made her arrangements accordingly, and submitted to the operation on the 11th of December.

Assisted by Dr. Huard, of Paris, and Dr. Yanney, of New York, and two other gentlemen, who requested to be present, we met at her lodging, a very small room, rather dark, damp, and cold, (46° Fahrenheit,) without means of warming it. Lying in bed, on her back, the abdomen well exposed, and chloroform administered, I commenced the incision a little above the umbilicus, and carried it down into the hair of the pubis. This cut brought the lower part of the tumor into view, but, proving of insufficient extent, was carried upward quite to the ensiform appendix, making an incision 22 inches long, by reason of the great convexity of the abdomen. It gaped only an inch wide, the recti muscles contracting rigidly, notwithstanding the anæsthetic state she was in. In front of the tumor, but high up, was seen a small portion of lean, gray omentum. With some force each hand was insinuated between the tumor and abdominal parietes, high into each hypochondrium, and strongly compressing it, while the assistants drew the recti apart, the mass rolled out of the abdomen, resembling a great graminivorous stomach. Broad flat veins meandered on its surface, traveling toward the broad ligament where they mostly congregated at its upper and lower borders, which were stretched six inches apart. A few gentle touches of the scalpel divided their peritoneal covering, and with a curved needle, a ligature of a single strong hempen thread buried in this cut was passed round them, and tied very tightly. The

same was done with the lower mesh. The intervening portion of the ligament held no vessels. As the tumor now lay out of the abdomen, by its weight drawing strongly on the broad ligament, it was easily severed near the ligatures from its attachment, so that not a teaspoonful of blood got into the abdominal cavity. The visceral and parietal peritonea were touched as little as possible. Thus far only a few minutes of time were required. The intestines gave no trouble, having become reduced in volume by long pressure, causing leanness and emptiness, and there was absence of flatus in them; so that now, the tumor being removed, the abdominal cavity looked like that of an eviscerated subject. The next step was to close this enormous cut, which, now that the distension was removed, was reduced to less than 14 inches long. Three long silver pins were first introduced, one near the navel, and one at equal distances above and below; between these, five common tinned pins of large size transfixed the remainder of the opening. Still the intervals gaped, and to close these eight interrupted sutures were inserted. Long adhesive straps were applied; and over the united line was placed a strip of old rag, dipped in blood obtained from the veins of the tumor. Over all, as a compress, were placed four napkins folded, and over these a large sponge, the whole secured by a five-tailed bandage. This great thickness of padding, for so it may be called, barely sufficed to bring the bandage on a level with the elevated ribs, so highly were they distorted.

The removal of the tumor occupied a few minutes only; but a considerable time was spent in closing the wound, for on the nice fitting of the edges I counted as one of the necessary means to ensure prompt adhesion, and escape inflammation. The two ligatures were brought out near the pubis.

The tumor weighed over 21 lbs., was composed within the sac of numerous cysts—three or four of them rather large, the others diminishing from the size of a small orange to that of a hazel nut, and a pea; the larger were filled with the usual thick, glutinous, chocolate-like fluid, and the small with clear, but ropy liquid. About 5 inches of the fallopian tube, with its fimbriæ, were removed with the tumor; it was pervious to a common probe for about 4 inches. The divided edges of the broad ligament retracted on the removed tumor about 3 inches apart and 8 inches long.

At 9 P. M., seven hours after the operation, complained of much dull pain, not in the soft abdomen, but under the hypochondriac cartilages, particularly the right one. This was due to the cessation of support these parts had lost by the absence of the tumor, and the

weight of the liver drawing heavily upon the suspensory ligament—a support that the thick padding imperfectly supplied. To take iv grs. of opium, and to have cold toast-water only.

12th, 7 A. M. Has had a comfortable night; skin moist and cool; pulse natural. *Evening.* Has had a good day. Having maintained the supine position, it was with difficulty that her urine could be passed without wetting the bed—an occurrence that her nurse, a most inefficient one, was heedless of; changed and dried her; skin is still cool, but the pulse increased in frequency. The only complaint she makes is the uneasy feeling in the hypochondria. To take iv grs. of opium.

13th. Has passed a very comfortable night, and complains only of the lassitude arising from her one position, and the dragging sensation in the hypochondria, which, however, is less than heretofore. Cool; pulse 90; no thirst. *Evening.* Good day; feels a sensation of flatus, and a desire to pass it, but cannot; has eaten nothing since the evening of the 10th, but is not hungry. To have dry bread and toast-water freely. To take a pill of iij grs. opium, iij of aloes, and iij of calomel; also an enema of tepid water.

14th. Was much disturbed during the greater part of the night by the riotous conduct of neighbors. Is a little feverish, tongue whitish, a little thirst. Repeat the enemata, the bowels not having acted. Gruel for breakfast. At 2 P. M. was rendered very hysterical by the act of a busybody, who called upon her to get some “explanations” regarding some previous tattlings. Bowels not yet moved. To take one ounce of castor oil; this operated three times during the night, followed by a very comfortable feeling.

15th. Felt well this morning; but at ten o’clock was thrown into violent hysterical convulsions, brought on by a quarrel with a visitor.

16th. Pretty well. 2 P. M. It is now the complete fifth day since the operation. Removed the dressings. The whole wound is united, excepting where the ligatures come out near the pubis, and here escapes a good deal of *liquor abdominalis*. The line of incision is not red; the skin of the abdomen is white and soft. She is very hollow, the belly is much below the level of the thorax, the ribs being still very prominent. Removed six of the thread sutures.

17th. Has had three motions produced by enemata taken at her own request. At 2 P. M. removed the dressings, which were saturated with *liquor abdominalis*. Took away two of the silver pins, which have caused suppuration in their course. The ribs are descending to place, but are still high, and the belly hollow, as if containing no intestines. Has eaten a quail for breakfast.

18th. Had a very good night, with long sleep. Catamenia appeared this morning, two days later than was calculated for at the time of the operation, to act as a critical discharge at the height of peritoneal inflammation should it be severe. Removed the third silver pin, which has caused a suppurated cavity containing a dessert-spoonful of thick white pus, and also removed all the tinned pins, none of which caused any suppuration. Less *liquor abdominalis* escapes to-day. Has a slight cough, from a cold taken, doubtless, at the time of dressing her in her very damp and cold room. To take ij grs. opium at bed time.

19. Feels very well, and is cheerful. Has more appetite than it is thought prudent to satisfy.

20th. Had epistaxis, to which she is subject, and which has relieved her cold.

21st. Very well, and very hungry.

23d. Was well this morning; but had another quarrel, growing out of something that a visitor had robbed her of, and which again produced hysterics. In other respects she is quite well. Catamenia have ceased; during its continuance had occasional epistaxis for three days. Escape of *liquor abdominalis* has quite ceased, probably owing to the peritoneum having adhered about the ligatures, enclosing them in a canal, and thus closing in the peritoneal cavity.

Jan. 2d. Has continued to progress favorably since the 23d December; is very well to-day, and got out of bed for the first time, twenty-two days since the operation.

5th. Was alarmed in the night by a noise taken for house-breaking; got up and rushed into the street to call for help, though the night was boisterous, cold and rainy; but has not suffered from so doing.

6th. The first ligature came off to-day; a length of six inches of it lay in the abdomen. She is up and about the house.

21st. Has continued quite well, with the exception of the retention of the second ligature, until this day. Her appetite is good, she lives generously, has filled out and fattened sensibly; the belly is much fuller, and the ribs having subsided gives her body a good appearance now. In some places the union line of the incision is not broader than the thickness of a half-dime. The sites of the interrupted sutures and of the tinned pins are fast disappearing, but those of the silver pins, which alone suppurated, are very marked. The length of the cicatrix has shortened greatly since the elevation of the belly and descent of the ribs.

22d. Passed the afternoon and evening at a friend's house.

23. Rode out to a place of recreation in the country; and after returning paid me a visit on foot.

As the number of these cases is not so great as to render the reporting of a few more a redundancy, I have ventured to give the foregoing one. It was the practice, in several of the cases operated on in England, to heat the apartment to avoid any injury that cold air might do to the peritoneum; but it will be remarked in this case that, though the patient's room was a cold one, no evil consequences followed. As regards the severity of such an operation upon the constitution, it will appear evident that the shock must have been slight indeed, since it was imperceptible, and delayed the usual occurrence of the catameniaë only two days; that peritoneal inflammation was never manifest; and that during the night of the sixth day

———In somno mens grato agitur amore,
Fluctibus expergens veneris cruciatur amœnis!

her idiosyncrasy—one that neither the disease nor the removal of one ovary subdued; which throws light on the origin, or remote cause of the ovarian hypertrophy in her case, and doubtless a temperament cause in the majority of cases.

This operation was performed 14th December, 1854; in a few weeks after she resumed her usual occupations, taking a great deal of exercise, and has continued in robust health until last heard from, a month ago.

New York, June 14th, 1858.

Puerperal Fever; an abstract of the Discussion at the Paris Academy of Medicine. Collated from the French Journals for the MONTHLY.

M. Trousseau.—The Academy has already been entertained for two or three sittings by a discussion upon puerperal fever. It has been spoken of as a sure thing, the existence of which no one denied. It is now time to reply to the question, “Is there such a thing as puerperal fever?” For my part, I do not believe there is. Not that I disbelieve in inflammations of great severity to which lying-in women are subject, but that I doubt the existence of a puerperal fever which is peculiar to women, and which cannot affect man.

Two years since, M. Lorain sustained before the Faculty an excellent thesis, entitled *Puerperal fever in the recently delivered female, the fetus, and the new-born child.* I am sorry that M. Lorain did not add, to make it more complete, “and in males who are present in hospitals in which lying-in women are received.” In fact, in all patients placed

under such circumstances, the lesions exhibit an appearance, a particular physiognomy which more or less resembles that found in women attacked with puerperal fever.

Let us not, however, anticipate, but let us first examine what takes place in the *foetus* and the new-born child during the prevalence of puerperal fever.

Every writer and every observer, who has studied this subject, agree that during an epidemic of puerperal fever the mortality of new-born children is considerably increased. MM. Charlier and Lorain, who gave in their thesis a very complete account of the last epidemic at the *Maternité*, have proved this fact, which had already been pointed out, but they have in addition shown that infants die of lesions analogous or similar to those observed in women victims of puerperal fever, of phlebitis, of peritonitis, of pleurisies, of pneumonias, and other visceral inflammations, which, independently of metritis, were very common during the epidemic of 1856, at the *Maternité*.

It is not only the infant born at full term and detached from the mother who thus suffers, but the infant born before the full term can enter the world with a peritonitis, a double pleurisy, contracted in the womb of his mother who is attacked with the symptoms of puerperal fever. I should instance still another fact, that women recently delivered, and who are received into other hospitals from the *Hopital des Cliniques*, or the *Maternité*, almost always come with children afflicted by severe ophthalmias, erysipelas, umbilical phlebitis, inflammation of the *vena portæ*, or other lesions generally mortal, and analogous to those which carry off the recently delivered in the special hospitals. Finally, and what is remarkable, children who are brought in to these women to be nursed, are frequently exposed to this deplorable influence.

Now, what takes place with the adult and male individuals who are treated in a hospital during the prevalence of puerperal fever? Ask M. Nelaton, M. Laugier, or M. Jobert what happens under these circumstances to their patients who have been operated upon, or their wounded? Ask them if it is then prudent or opportune to operate with the knife or bistoury? Ask them if they cannot surely foretell the existence of puerperal fever in an adjoining ward by observing the wounds take on a bad aspect, or being covered with hospital gangrene and their patients attacked by serious symptoms, which accompany purulent absorption, multiple abscesses, and visceral phlegmasias?

Is it necessary that a wound should, so to say, open the door to contagion as in the preceding cases? Assuredly not, as the following will prove. In 1846, M. P. Dubois closed his clinic, it being invaded

by a formidable epidemic of puerperal fever. The lying-in women were scattered through the other hospitals of Paris. The wards of the hospital of M. Dubois were opened to ordinary diseases, under the charge of M. Pidoux. Soon he was surprised to see that every disease assumed promptly a singular physiognomy, which became aggravated notwithstanding the best treatment, and soon ended in death. M. Pidoux discovered in these symptoms the malignant influence of puerperal fever, which still remained in the wards after the departure of the lying-in women.

It is the same with surgical diseases where there is no wound—tumors, for example. Surgeons can tell you that in the wards adjoining those where women are delivered in which puerperal fever is present, it is not rare to see, even in patients neither wounded nor operated upon, symptoms arise such as want of appetite, diarrhœa, followed by general symptoms of considerable seriousness.

Such are the facts which seem to me to sustain the opinion I have enunciated, and which at first appeared paradoxical to those who admit, without reserve, the existence of puerperal fever.

Now that you have heard my profession of faith relative to puerperal fever, let me bring proofs of it. I shall not retrace the history of this disease; this has been already done most admirably by M. Depaul; I shall only give the outline of some of the most prominent features, in order to show more clearly that they can be found out of the puerperal influence.

In one form, which I shall call purulent, with M. Hervez de Chégoin, we see phlebitis of the uterine sinus, of the ovarian veins, of the hypogastric veins, of the veins of the leg, abscesses in the viscera, collections of pus in the serous membranes, &c.

In the acute putrid form, which had been described by M. Danyau and others before M. Hervez de Chégoin, there is a series of severe ataxo-adynamic phenomena, which simulate the symptoms of a fatal intoxication.

Finally, there is a third form, which I shall call *nervus puerperal typhus*, in which disorders of innervation are alone remarked, which are present from the first, taking immediately a most serious character, which forms the most dangerous and the most fatal of the forms of puerperal fever.

Let us see, now, if these symptoms are present in other conditions than in the puerperal state.

M. Lorain was the first to demonstrate conclusively the existence of puerperal fever in the fœtus. He has reported eight cases of

the foetus dead in the mother's womb from purulent puerperal fever, with pus in the tissues of the viscera and in the serous membranes; false, fibrinous membranes upon the pleura, upon the peritoneum, and agglutination of the intestines.

I had, as early as 1842, called the attention of my students, at the Necker hospital, to the erysipelas and phlebitis of the new-born, and was in the habit of designating their appearance under the name of puerperal fever of the new-born. This idea has been developed both by M. Delpech and M. Bouchut, but no one has furnished such authentic proofs as M. Lorain, for establishing the remarkable identity of the puerperal symptoms in the female, the foetus, and the new-born.

But it is said the foetus, and even the infant just born, are still parts of the mother, and appertain to her organization, as a graft belongs to the plant upon which it is grafted. That is true, but still I will add that infants have been attacked with puerperal symptoms in the maternal womb, when the mother had apparently nothing—that is to say, she was, as yet, only under the latent influence of a diathesis which she could overcome, and which, in fact, she frequently subdues.

Let us add still more. M. Tarnier reports that in the midst of the severe epidemic of 1856 a woman, in most excellent health, came to the hospital. At the commencement of labor, before the neck was fully dilated, before any tearing, or ulceration, or wound of the tissue of the uterus could have taken place, she suddenly had a terrible chill; it was the signal of a puerperal fever, which carried her off a few hours afterward.

M. Tarnier also reports that he has seen young women, studying as *sage femmes*, die of puerperal fever, taken during their menstrual period. It will probably be said that menstruation is a kind of puerperal condition, and that the epithelial exfoliation which then takes place from the mucous surface of the uterus, offers some analogy to the placental exfoliation. I reply to this objection by the following fact: A young woman, who had menstruated the three or four first days of May, was taken sick upon the 11th, after she had finished menstruating several days, and died the 13th or 14th from a severe puerperal fever. It is true, however, (which detracts much from the weight of my observation,) that, although this woman continued at her occupation, she complained of feeling unwell and of loss of appetite for the five or six days which followed the flow of the menses, so that in this case even the morbid infection might have been contracted at the time of the catamenial exfoliation.

Let us now see what happens to the wounded and those operated upon in hospitals in which puerperal fever is present. In 1826, M. Velpeau, in an excellent memoir, pointed out the frequency of symptoms called purulent absorption, among the patients in the wards of M. Antoine Dubois, at the Clinique Hospital, which then received, as now, a great number of lying-in women. A little later, Dance published some similar facts. In 1838, M. Tessier wrote a valuable work upon purulent infection, in which he established a similarity between certain symptoms observed in those who had been subjected to operations and the phenomena of the female attacked with puerperal fever. M. Velpeau, M. Dance, M. Tessier, all describe phlebitis, purulent collections in the muscles, in the viscera, in the serous cavities, &c., in these cases.

In hospitals, where puerperal fever reigns, putrid infection destroys quite as many among the wounded as purulent infection.

As to nervous typhus, that which is observed in women in the puerperal condition, differs in no respect from that which is met in patients wounded, following alcoholic excesses, or that which succeeds the great traumatic injuries upon the field of battle. There is the same physiognomy following the traumatic as the puerperal nervous typhus.

These are the facts, and I believe I have sufficiently demonstrated that the serious lesions observed in women recently delivered are also observed in individuals beyond the influence of the puerperal condition. It is not, therefore, in this condition that the cause of these symptoms should be sought; it is necessary to seek for it in something more general, which I shall strive to define.

I do not, however, wish the Academy to suppose that I am not a specialist and the enemy of the local cause of this disease. [M. Trousseau then reviewed the opinions of those who had preceded him in the discussion upon this point, as well as those whose opinions had already been stated in their writings, such as MM. Velpeau, Dance, Behier, and Dumont-Pallier, and then continued thus.]

Is it true, gentlemen, that pus can be absorbed? I ask the most rigid micrographist who has mathematically ascertained the dimensions of the pus globule, and the capacity of the capillary vessels. All are of accord in replying that the globule, which is the essential element of pus, cannot be absorbed; it cannot circulate in the capillary ramifications.

Admitting that pus can be absorbed, can the following facts be explained by absorption?

A woman dies after two or three days' illness, from puerperal fever, and five or six quarts of pus are found in the pleuræ or in the peritoneum. Can it be said that this pus was taken up from the uterine cavity and poured by the vessels into the serous cavities? And the foetus that dies from puerperal symptoms, with visceral abscesses and purulent collections in the pleuræ, or in the peritoneum; where does all this pus come from? There is no wounded surface in a state of suppuration, from which it could have been absorbed? Cannot I say the same of women who are attacked with puerperal fever during the menstrual period, or even when they are not in that condition? Cannot I say the same of those who, entering the surgical service of an hospital, adjoining the lying-in wards, for the purpose of being operated upon for some cancerous tumor without being wounded, nevertheless suffer from the epidemic influence, and at the autopsy present all the lesions of purulent infection already described?

It is necessary, then, to seek elsewhere than in absorption for the origin, the source of that pus which is poured in such profusion into the organism.

In truth, gentlemen, I have always admired the long-suffering of the surgeons of Paris. It is a fact that, in the hospitals of large cities, in Paris particularly, the mortality succeeding great operations exceeds that of the hospitals of small cities, and specially that of the country. Is it because the surgeons of the country and small cities are more skilful than those of Paris? Certainly not. Is the cause of this difference, then, in traumatism? Not at all, for this is the same everywhere, in the small city as in the large city. Wherein is then this cause? We shall soon see.

[In this connection M. Trousseau discussed the opinions of M. Beau, who regards puerperal fever as symptomatic of a phlegmasia, which is in its turn the result of an inflammatory diathesis. M. Beau's views will be found in the preceding number of the *Monthly*. M. Trousseau thinks that M. Beau is wrong in not distinguishing puerperal symptoms from puerperal fever properly called, and he accuses all those who believe in the local character of the disease, with making the same mistake.]

The difference between the symptoms, simply puerperal and the fever called puerperal, is explained by a special character (*spécificité*), which does not affect the first, but which influences puerperal fever.

Take the pus of variola and of ecthyma, ask an able chemist to analyze them, to submit them to every reagent, and then ask him if he finds any difference between them. Strive to find, if you can, by the

most severe analysis, and the most delicate reagents, any difference between the poison of the viper and gum water. You will find absolutely no distinctive characteristic in either. But there is another reagent more subtle, and more powerful than the chemical reagents, the *living reagent*, which will show you with a marvellous distinctness the difference between the pus of variola and ecthyma; the poison of the viper and gum water. Is there not something special in this? would you not call this *specific*?

But tell me, you who are specialists, how do you distinguish a severe simple peritonitis in a lying-in woman from a special peritonitis, from a peritonitis of puerperal fever? Although I cannot tell the difference, or establish the distinction, does it follow from this that none exist? Recall what I have just said in relation to the chemist, who is unable to distinguish the pus of variola from that of ecthyma, the poison of the viper from that of gum water. You, who do not admire the nosological divisions, and who reject the idea of a morbid specialty, do you confound, notwithstanding these common characteristics, a severe common colitis with an epidemic colitis, with contagious dysentery; simple enteritis with dothineritis; simple bronchitis with whooping cough? Apply these same principles, this same prudence, to the distinction of puerperal fever, and puerperal symptoms.

What is the difference between special diseases and those which are not? Van Swieten will tell you. [M. Trousseau quoted a passage from the Commentaries of Boerhaave.] There exists then in diseases a kind of *ferment*, a *morbific matter*, the nature of which is only known by its effects; but which once developed in the human body, extends its sad influence throughout, and soon assimilates the whole economy to its own substance, as the yeast of beer thrown into a sweetened liquid is not long in transforming, in assimilating the whole of it to its own substance, however great may be the quantity of the liquid.

The organism receives some virus, which is a truth requiring no demonstration; but it fabricates some, also, which all do not admit.

The morbid matter, the virus once developed or brought into the economy, germinates, is developed, and produces apparent effects; it finds a convenient place of action. But there is no more favorable location for the germination of morbid ferments than that of wounds. Poison produced in a point of the organism increases, propagates itself, and, as I have just said, soon assimilates the whole economy to its own substance. It is in this way that an atom of pus or of the virus of variola in the mass of the blood is sufficient to produce puru-

lent infection, or for causing the marked manifestations of variola to break out.

I believe, then, that there is also in puerperal fever something special, which constitutes the character and the foundation of the disease. This something belongs to the lying-in female, who undoubtedly is in a grand *morbid opportunity*, in a remarkable *pathological aptitude*.

At the time of menstruation, do we not see various phenomena of the intelligence appear; various difficulties of innervation; modifications of the mammary apparatus, which certainly indicate a general cause? During gestation, do we not observe changes in the blood, in the urine, in most of the secretions, and also disturbances in nutrition, owing to the same cause?

Finally, at the time of parturition, are not a series of phenomena produced which are well known, and which show the action of a general cause—the same doubtless as those, the influence of which we observe during menstruation and gestation, but now manifested by more observable effects, by characters more distinct? All these phenomena are the various results of what I shall call the *génésique fever*.

Is it astonishing, then, that a female in the conditions I have just described, should be subjected more easily to the influence of certain ferments, certain pathological poisons? This is the *puerperal diathesis*; it is a great opportunity for contracting disease—nothing more.

Considering the subject of treatment, M. Trousseau remarked, that he also had had his successes and his hours of illusion; but that, since he had learned to distinguish puerperal symptoms, properly called, he found he was not any more successful than others against true puerperal fever. He did not believe that the best ventilation in the world would influence an epidemic. Evidence of this is seen in camps in the open air. Nor did he believe in uterine and vaginal injection, of which so much is said. In puerperal fever, as in wounds, the infection is owing to something else than the contact of pus with the traumatic surface, and its longer or shorter sojourn upon the naked tissue. There is something of which we are ignorant, and for which the most assiduous washings and the greatest attention to cleanliness is of no account. Nor did he believe in the treatment by sulphate of quinia. As a preventive measure, he had no confidence in it; for in those cases in which it has had an apparent success, how is it known that they were cases of true puerperal fever? for it is well understood that, in seasons of an epidemic, all cases take on the character of the reigning disease. The capriciousness of an epidemic has been often remarked, invading one ward and leaving another untouched; affecting all fe-

males who enter a hospital to-day, and suddenly disappearing to-morrow. This, if I recollect aright, was the case with the wards under the care of M. Piedagnel, they being one of the privileged class; so that, notwithstanding his great authority, I am still doubtful as to the preventive action of sulphate of quinia.

It is the same with the curative effects of this salt. The cases reported cured by M. Beau, are those where the peritonitis was limited to the sub-umbilical region. I can readily believe this; but I also believe that a peritonitis so simple, so limited, might be cured by the use of emollients or local anti-phlogistics, and even by expectation alone. The mistake is in confounding puerperal fever with simple puerperal symptoms. We also cure these latter, and without the aid of quinine.

I close, declaring, as at the beginning of my remarks, that puerperal fever is a specific disease which attacks lying-in women, new-born children, the fœtus in the maternal womb, women not in the puerperal state, men even, wounded or having a limb amputated, and other patients also, who are in conditions of puerperality. I add, that the treatment of puerperal fever, both prophylactic and curative, is yet to be discovered.

Influence of Manufactories of Chemicals on Vegetation and Public Hygiene. From the Journal de Chémie.

A commission was appointed by the Belgian government, August 30, 1854, to investigate the effects of certain manufactories of chemicals on the operatives employed, as well as on the vegetation in the neighborhood. This commission was divided into two sub-committees, in order to hasten, as much as possible, the solution of the numerous questions that were involved. One of these, composed of two chemists, was specially charged with the duty of visiting the shops, the minute examination of the apparatus employed, and the study of means suitable for lessening the effect of acid emanations; the other, formed of botanists and agriculturists, directed its attention to the condition of vegetation in fields and forests adjoining manufactories. These sub-committees have furnished a report which is of general interest.

The committee of chemists, in order to make an exact account of the influence of each process, made analyses of the different products, at various stages in the process of manufacture, and often analyzed the materials first employed. A thorough study was made of the nature and quantity of gases escaping from the chimneys of the manufactories, which have been considered as most potent causes of the unhealthiness

of the neighborhoods. Their work was confined exclusively to establishments in which sulphuric acid, nitric acid, sulphate of soda, chlorhydric acid, soda, chloride of lime, and copperas (sulphate of iron) were made. Such of their results as possess especial interest, have been selected for our pages.

Manufactories of Sulphuric Acid.—The manufacture of sulphuric acid, despite the perfections which science has endeavored to introduce, can rightly be placed among those of an unhealthy character. The inconveniences which arise from its manufacture depend principally on the difficulty of completely condensing the gases, which, by their reaction in the leaden chambers, give rise to the sulphuric acid. Among these gases are two which, in consequence of the manner the process is carried on, can escape from the chambers—sulphurous acid and hyponitric acid—both irrespirable, and especially injurious to vegetation. It was interesting, then, to examine what was the influence exercised by these gases in the manufactories where they were produced. It was first necessary to determine their real presence and proportion in the emanations from the manufactories. The commission made this determination by two different methods—from data furnished them by the workmen employed in the manufactories, and by direct analyses. It will be understood that, if we sum up on the one hand the quantity of sulphuric acid annually made in a manufactory, and on the other hand the quantity of sulphur burned in the same establishment, we can, by subtracting from the latter the amount which exists in the sulphuric acid, obtain the quantity of sulphur burned which has *not* been condensed as sulphuric acid, and which would be communicated to the atmosphere as *sulphurous acid*. There is, however—and this circumstance has not been overlooked by the commission—a source of error in this method of calculation, which rests upon the fact that a portion of sulphur, very small generally, may escape as sulphuric acid. The commission, therefore, considered it necessary to analyze the gases directly at their escape from the chambers, and thus found the results obtained in this way slightly different from the first results.

But here a difficulty occurred, the extent of which chemists will appreciate. The commission was only able, at these places—that is, the opening of the chimneys—to make qualitative examinations for the determination of the true nature of these gases; their quantity had to be determined in the laboratory in specimens transported thither in flasks. Thus they determined readily the presence of nitrous compounds at the opening of the chimney, which they could never detect in the gaseous mixture analyzed in the laboratory, in consequence,

doubtless, of the formation of a small quantity of sulphuric acid. This circumstance detracts somewhat from the interest of the results of the commission, in that it only furnished the absolute per centage approximately of the sulphurous acid. The result of the examination of the gases escaping from the chimney was the determination of an average per centage, daily, of Sulphurous Acid 0.955, Oxygen 14.961, and Nitrogen 84.08. For an average manufacture of 1,381,609 kilogrammes of sulphuric acid produced, there was a daily loss of 225 cubic metres of sulphurous acid gas.

Manufacture of Soda.—The inconveniences arising from the manufacture of this article are greater than in the case of sulphuric acid, since the difficulty is greater of condensing the gases at their exit from the chimney. The smoke from the latter usually contains the products of the combustion of pit-coal, a notable quantity of sulphuric acid, and a much larger quantity of chlorhydric acid. In four manufactories there was an average daily loss of 613 cubic metres of chlorhydric acid. The amount varies with the method of condensation employed by the manufacturer. The commission state that high chimneys ensure the removal of noxious emanations, which, although diluted with large quantities of air, *still* descend to the ground, and in wet weather this takes place very rapidly, so that such chimneys only ensure a greater radius for the deleterious emanations. They advise that the Government should not suffer high chimneys to be erected, unless they were supplied with apparatus for condensation.

The second part of the report of the commission consists of an examination of *the alterations in vegetation produced by these emanations*. In a general way, attention was paid to their action, according to the direction of the winds, the humidity of the atmosphere, rains, the topographic configuration of the soil with its reliefs; and they concluded, as would have been easily predicted, that, other things being equal, the effects were more sensible, in the most usual direction of the wind, under the influence of foggy weather, or rain, and when the smoke, either from the disposition of the surface or the direction of the wind, was brought into close contact with the surface. And wherever the effect produced by the smoke was manifest, it was possible to demonstrate by re-agents the presence of the chemical agents to which it was due. These were ordinarily chlorhydric or sulphuric acids. On the other hand, it was not possible to detect the presence of these acids on vegetation of the same species, when *no* signs of alteration were noticed.

But dare we conclude from these observations that no effect, in fact,

is produced, except where it is possible to determine the presence of a chemical agent? The commission have not gone as far as to insist on that. They have, however, given us the relative sensibility to the influence of these acids, of a number of plants. This number comprises thirty-four trees and shrubs. The most sensitive of all was the hornbeam, (*Carpinus Betulus*,) and the least so, the raspberry, the spireas, and the alder.

The conclusions of the commission are summed up as follows: 1st. Acid emanations, which escape from manufactories of chemicals, are capable of injuring the growth of certain plants; 2d. Nevertheless, the effects are produced in such an unequal way upon different kinds of ligneous and herbaceous plants, as that certain species appear to resist the harmful influence of the acid gases very well, while others are injured by the same, but to various extents; 3d. Among the last some cease to show any sign of alteration, even at a slight distance from the manufactories, whilst the alteration of others is effected at great distances, but always within certain limits; 4th. The radius of the injurious influence of such acid gases depends on several circumstances essentially different, but which cannot be absolutely determined; although in each given case they can be determined practically by observing at what distance vegetables, which are readily injured by the emanations, cease to present such special alterations as could be ascribed to their action; 5th. The radius of injurious influence, determined in this way, differs very much, not only in different establishments, but even in different directions from the same; and it was always greater in the direction of the dominant winds, whilst in the direction of winds less frequent it was always small and inconsiderable; 6th. In the direction of the dominant winds, the influence did not extend beyond 2,000 metres as a maximum, nor below 600 metres as a minimum.

Influence of such Manufactories on Population.—From the data collected by the government for 5 years, with reference to births and deaths, it appears that the means were favorable to the increase of population, as well in the districts where the manufactories were established as in those adjoining. Thus, from 1839 to 1843 the ratio of deaths was 1 in 66, and from 1844 to 1848, 1 in 58. It is remarkable that no case of cholera had appeared in these manufacturing districts, and that, with the exception of Floreffe, all were exempted from the typhoid epidemics which have prevailed in the province since 1843. During the epidemic of Floreffe, which raged in the hamlet of Buzet, where there were 75 sick, only one of the laborers who worked in a chemical

manufactory was attacked by the disease, and he had taken a long journey two days before.

A report of Dr. Cambrelin, president of the Medical Commission of the Province of Namur, states, that the emanations from the chemical manufactories of the valley of the Sambre do not give rise to any peculiar affection, and that the diseases of the chest are not now as frequent as formerly in the districts where the manufactories exist. The general health of the neighboring population remains the same as in the past—even that of the laborers occupied in the manufactories; and if they are ever attacked at the beginning of their apprenticeship with laryngitis, bronchitis, or difficulty in respiration, custom soon causes these indispositions to disappear, without any recurrence. The same observations are made as to the horses employed in the establishments.

Thus, contrary to expectation, the ratio of mortality is diminished in the midst of these manufactories of chemicals; but should this diminution be attributed to the direct influence which these manufactories have on the health of the workmen and the population? No one would dare to assert this. These manufactories have contributed, in one sense, to this happy result, by extending comfort around them, and offering regular employment, with suitable wages, to a portion of the population. In any point of view, and whatever part we may wish to ascribe to them in the way of direct influence, none of the facts will authorize us to conclude that these manufactories have exercised an *injurious* influence on health, and that they are not a cause of prosperity for the countries in which they have been established. L. H. S.

On the Change of Color in Venous Blood of the Glandular Organs, in repose and in action. By M. CLAUDE BERNARD, *Journal de Chimie et de Pharmacie*.

It has been admitted, ever since the discovery of the circulation, that the blood of the arteries is red, and that of the veins black, with the exception that the opposite holds good in the case of the pulmonary veins and arteries. This characteristic furnished Bichat the basis of his great division of the circulation, which was afterwards adopted by all anatomists—a vascular system with red blood, which carried the blood from the lungs throughout the whole body, and a vascular system with black blood, which returned the blood, from all parts of the body, to the lungs. The investigations and observations made by Claude Bernard within the last few years, and the results of which he

communicated to the Institute, January 25th, 1858, show that this proposition cannot be accepted as absolutely true.

This skillful observer, in fact, determined, in a large number of vivisections, that the blood contained in the veins is sometimes black and sometimes red, and that when it presents the latter appearance it remains black in the vena cava inferior which receives the blood of the vein.

The fact being once established, the cause of the difference of color can be well determined, and it is no other than the state of activity or repose of the kidney in its secretion of urine. He has demonstrated, by the most delicate experiments, in his course at the College of France, that, when the urine flows from the kidney into the ureter, which transmits it to the bladder, or when it has just been formed, the blood contained in the veins is red, and that it again becomes black when the flow of the urine ceases.

The same experiment having been made on the sub-maxillary gland of a dog, furnished the same results. The flow of saliva through the proper conduit of this gland, and the presence of red blood in the afferent vein, were two phenomena exactly coincident, just as the absence of saliva and a black discoloration of the blood in the same vein. Some analogous experiments were made on the parotid gland and the glands of the abdominal portion of the intestinal tube, which gave similar results; but, adds the author, with the habitual strictures he exhibits in his conclusions, the study of the subject cannot be complete until such experimental researches have been pursued on every gland separately.

It results from the facts contained in the paper of Claude Bernard, that if, in a physiological point of view, we should preserve the qualification of red blood as peculiar to arterial blood, (which is, properly speaking, nothing but the venous blood of the lungs,) that of *black* blood can only be maintained in a general way for the venous blood. From some other investigations of the same author, it appears that some physical and chemical modifications correspond with the different states of coloration, and should be taken into consideration in analyses of blood, whose composition is not the same in a state of activity and of repose in the same organ.

The last point of view is not only applicable to the glands, but it should embrace all the organs of the body, whose venous blood should be studied both in a state of repose and of functional activity. It is worthy of notice, that although the blood flows red from glands in a state of activity, on the other hand it flows of a very black color, and

with different physical qualities, from a muscle which is contracting. This latter fact was specially announced by Mons. Brachet, of Lyon, (*Physiologie Élémentaire de l'Homme*,) in 1840, who demanded the right of priority of discovery, in a note communicated to the Academy of Sciences, in the session which followed the reading of Claude Bernard's paper. But Brachet claimed this fact as general, that "always and everywhere, the blood loses its red color in traversing organs, and loses a certain quantity of hematosine; *but the loss is larger when the organs are in a state of activity; that the blood becomes blacker even when the organic act removes nothing from it, as when a muscle contracts.*" But if the opinions of the two authors are the same with reference to the blood obtained from muscles in a state of activity, they are diametrically opposed as concerned glandular blood, and it is to be regretted that M. Brachet, in his communication, was not explicit on this divergence.

Claude Bernard, in his experiments on the sub-maxillary gland, has been enabled, by means of electric excitation, to provoke the activity of the organ, as it were at will, from which was produced the secretion of saliva and the red coloration of the blood contained in the vein; and this fact suggested to him the remark with which he terminates his paper: "All the modifications produced in blood by the functional activity of the organs, are always determined by the nervous system. Consequently it is necessary, at this point of contact of the organic tissues and the blood, to investigate what may be the special rôle of the nervous system in the physico-chemical phenomena of life." And he adds that the development of the facts which belong to this point in general physiology, will be the subject of a communication, which we shall not fail to present to our readers. L. H. S.

The Influence of Light on Animals. Translated from a paper by Mons. T. BECLARD.

During the last four years we have been performing, in the laboratory of the Faculty of Medicine, a series of experiments relating to the influence of ordinary white light, and of the different colored rays of the spectrum on the principal functions of nutrition. The object of this article is to present, by anticipation and in a concise form, some of the most important results of these experiments.

I.—The nutrition and development of animals not possessed of lungs or bronchia, who respire through the skin, appear to suffer very remarkable modifications under the influence of different colored rays of

the spectrum. The eggs of the *musca carnaria*, taken in the same group and placed at the same time under bell-glasses of different colors, give forth maggots; but if, at the end of four or five days, the maggots, under the bell-glasses, be compared, their development will be found to differ very much. Those most fully developed will be found under the violet or blue, and those least developed under the green. The different colored rays can be grouped, as regards their action on the development of maggots, thus: violet, blue, red, yellow, white, green. Between the development of those under the violet, and those under the green ray, there was a difference of one-third in general size and length.

II.—This first result induced us to examine the function which explains best, if I may so say, the quantity of organic metamorphoses—I mean the respiration, whose products can be received and estimated.

A long series of experiments upon birds has shown us that the quantity of carbonic acid produced, in a given time, through respiration, is not sensibly modified by the different colored bell-glasses under which they had been placed. The same was the result with the lower mammalia, as mice. We must, however, remark that the skin, in birds and mammalia, is covered with feathers or hairs, and that the light does not strike its surface. But we know, from the researches of Régnault and Reizet, that the change of gases (endosmose, &c.,) which takes place at the surface of these animals, is very slight.

III.—When we examine the influence of the different colored rays of the spectrum on frogs, who have a naked skin, and whose cutaneous respiration is energetic, (it equals and often surpasses the pulmonary respiration,) we can obtain remarkable facts. Our experiments here were only made with the green and the red ray. In the green ray the same weight of frogs produced, in the same time, a larger quantity of carbonic acid than in the red ray. The difference may be more than a half, generally a third, or a quarter more.

IV.—The skin of the animal (very likely the color of the skin) appeared to have a determining influence on the preceding results. For example, if a certain number of frogs were placed under a green glass, and a like number of the same weight were placed under a red glass, and the quantity of carbonic acid produced weighed at the end of 24 or 48 hours, the excess was in favor of the frogs placed under the green glass, as we have just mentioned. Immediately take the skins off the frogs and replace them in the same conditions, the experiment will change; the quantity of acid produced by the skinned frogs will be larger in the red ray than in the green.

V.—The influence of the colored rays of the spectrum upon the proportion of carbonic acid exhaled, in a given time, by a living animal, continues for some time with the dead animal, (muscular respiration,) and ceases as soon as putrefaction begins; that is to say, after the disappearance of cadaveric rigidity. Butcher's meat taken on the day following the death of the animal, or the next day, (then the cadaveric rigidity has ceased,) furnishes always, for an equal number of pounds, the same quantity of carbonic acid when its fragments are placed under the different colored rays.

VI.—A small number of experiments tried on the cutaneous exhalation of aqueous vapor, show that in the dark, (at the same temperature,) frogs lose, through evaporation, an amount of water one-half or one-third less than when exposed to ordinary white light. In the violet ray, the quantity of water lost by the animal in a given time is precisely the same as in white light.

L. H. S.

Inhalation of Carbonic Acid as an Anæsthetic. From the French of Dr. OZANAM.

The effects of carbonic acid resemble those of ether, according to the author, but are more fugitive; and while it is necessary in the case of ether to interrupt the inhalations after short intervals, an opposite procedure is required for carbonic acid.

a. As long as one wishes the sleep to be prolonged, the inhalations must be continued.

b. These can be prolonged ten, twenty, thirty minutes and more, without danger to life.

c. When the inhalations are stopped, the waking is almost always immediate.

The experiments of Ozanam and Faure have never resulted in death. When death does take place, it is slow, progressive, and one can predict for some time in advance the moment of its arrival, by considering, as Faure has done, the condition of the heart and the pupils. The following experiment, related by Ozanam, is most interesting.

I had prepared by Mons. Fontaine a gas bag containing about 100 litres of carbonic acid, being resolved to prolong the anæsthesia as far as possible. The animal was put to sleep in three minutes, without convulsions, and remained on its side in a quiet sleep without being held. The inhalations were continued for 87 minutes, and the apparatus was then withdrawn; full sleep lasted 5 minutes more; towards the

tenth minute the paws began to be agitated; at the fifteenth the animal arose. One hundred and two minutes were thus consumed in the experiment—a time much longer than is required by the longest operations.

We believe that Faure and Ozanam purpose the use of *asphyxiated anæsthesia, or anæsthesia produced by carbonic acid*, for man. Faure and Ozanam say, that they have respired the gas, if not to the point of producing sleep, at least until they felt the first effects. Its taste is slightly piquant, about as pleasant as that of ether, and it is an excitor of the saliva. Ozanam says that the ethers, chloroform, and carbonic oxide determine anæsthesia by robbing the arterial blood of its oxygen, so as to produce carbonic acid, and thus making the blood venous. Carbonic acid itself does not decompose the blood; it removes no vital principle from it, but contributes progressively, and so that it can be graduated at will, the necessary quantity of carbon to determine the insensibility.

L. H. S.

A Case of Labor in which the Fœtus presented by the nucha and back of the head—demanding craniotomy. By CHARLES A. BUDD, M. D., Teacher of Obstetrics in the New York Preparatory School of Medicine, &c., &c.

The following extraordinary case is one which, both from its rarity and peculiarity, I am inclined to regard as worthy of record.

Mrs. B——, a short, thick-set woman, was confined on the evening of March 29th, 1858, with her third child. She had been in labor nearly *forty hours*, when she was seen by Dr. Geo. T. Hough, of this city, who, recognizing difficulty, desired that I should be sent for. It seems that Dr. H. had succeeded a practitioner who, having become alarmed, had received his fee and left. The woman was beginning to show unmistakable evidences of exhaustion, and the necessity of immediate interference was very evident. Upon making an examination I could not satisfactorily detect the position, although I could distinctly recognize—high up—the head, and *what appeared to me* to be one of the mastoid processes; the os uteri was not fully dilated, nor did the presenting part at all impinge upon it during a pain. The sounds of the fœtal heart were not audible, both the doctor and myself having failed to detect them after several trials.

After submitting the woman to the influence of chloroform, I attempted to apply the forceps, but was foiled in whatever way I endeavored to pass the blades; and then found, upon a closer and more careful inspec-

tion, that the *nucha* and *back of the head* were offering, and that which I had mistaken for one of the mastoid processes was, in fact, the seventh cervical vertebra or vertebra prominens. It seems that the woman had left lateral obliquity of the uterus, and the vertex, instead of engaging in the pelvic cavity, had over-ridden the brim, so that the entire vault of the cranium was impinging upon the right ilium, and the uterine contractions had expended their power in endeavoring to force the neck of the child through the pelvic inlet. The walls of the uterus were so closely contracted around the body of the child as to preclude the idea of either version, or rectifying the position with the vectis, and my only alternative was to perforate. This I succeeded in accomplishing at a point nearly midway between the posterior fontanelle, and the foramen magnum at the base of the cranium; and after evacuating the brain, and using alternately the crochet and Gardner's tractor (with which I was enabled to exert a most powerful tractile force,) I accomplished the delivery.

The prolonged labor had the effect of inducing so thorough a condition of uterine debility, that it was with the utmost difficulty I could induce an efficient and permanent contraction; and the hæmorrhage after the delivery of the placenta was so alarming that I was obliged to introduce my hand, for the double purpose of removing a quantity of coagula, and stimulating the organ to put on proper action.

The woman made a rapid and satisfactory convalescence.

No. 143 East 13th Street, N. Y.

REVIEWS AND BIBLIOGRAPHY.

Outlines from a course of Lectures on the Principles and Practice of Surgery, delivered by E. Geddings, M. D., Professor of Surgery in the Medical College of South Carolina. Prepared by J. S. WARING, M. D., and SAMUEL LOGAN, M.D., from notes taken during the course. S. G. Courtenay & Co., Charleston: pp. 560.

Reports of lectures are to us always attractive, when cleverly done, from the fact that there is preserved in them a certain freshness, and a peculiar personal influence from the lecturer, which evaporates in the slow distillation of his thoughts in the preparation of a methodical treatise. As text-books for students they are in some particulars more objectionable, but to the practitioner of several years they recall not

only his student days, but many topics of scientific discussion far too apt to be permitted to escape from the mind.

Opportunity has not been afforded us for a minute and thorough reading of all of these lectures of Prof. Geddings, but those to which we have given attention are interesting and suggestive. On many points we should not agree with him, and a minute review of the work would call for many discussions of his doctrines.

But in spite of this we heartily commend the book, and it is perhaps none the worse that it is not one of those which tempts indolent men to follow it implicitly, but rather tends to awaken thoughts in their minds of more real use than blind obedience to any dogmas. The subjects are as varied as those usually embraced in a course of lectures on surgery, and each chapter must of course be short. The editors have themselves contributed some essays on subjects not touched in the lectures, making the volume more complete. It is to be regretted that they did not use greater care in the proof-readings, for there are a great many typographical errors, which a little attention would have avoided.

P.

Contributions to Operative Surgery and Surgical Pathology. By J. M. CARNOCHAN, Professor of Surgery in the New York Medical College, Surgeon-in-Chief to the State Emigrants' Hospital, &c. With illustrations drawn from nature. Philadelphia: Lindsay & Blakiston.

Number one of this series of surgical publications has been placed on our table. It contains the case of amputation of the entire lower jaw, to which we have heretofore had repeated occasion to allude, together with some remarks on that operation; and cases of Elephantiasis Arabum, successfully treated by ligature of the femoral artery. Of this latter disease three cases are now reported by the author, in the last of which both femoral arteries were tied, and the prospects of the patient are very good for entire recovery.

It is clearly unnecessary for us to analyze the cases reported in this *livraison*, familiar as they are to many of our readers. To those who appreciate the luxury of handsome type and good paper we would say, that this publication, by its quarto size and large print, leaves nothing to be desired in these respects.

Two lithographic illustrations accompany this number. That of the amputation of the lower jaw gives a good idea of the various portions of the bone after maceration. The likeness of the patient is quite accurate, though the line of the incisions was not so marked in his face,

when we used to see him, as it is drawn by the artist. One would readily have passed him without suspicion that he had lost his inferior maxillary bone. The patient afflicted with elephantiasis we did not see, and cannot therefore judge of the accuracy of the delineation. It is, however, sufficiently spirited.

The whole series is to consist of ten similar numbers, and being familiar with most of the cases to be described, as well as with the doctrines of the author, we do not hesitate to say that they will constitute a valuable addition to the library of every one who practises surgery.

P.

SELECTIONS.

On the Comparative Use of Ergot and the Forceps, in Labor. By B. FORDYCE BARKER, M.D.

I understand the duty assigned me by the Society to be, to contrast the indications for the use of one of these efficient agents in parturition, in preference to the other. I shall endeavor to define the powers of each, to point out the conditions where each may be made available in assisting labor, and also the indications which forbid a resort to either of these resources. I shall aim to bring the subject up to the present state of science, as derived from the highest obstetrical authorities, based on the most extensive clinical observation, and the soundest and most philosophical reasoning. But in order that I may not occupy too much of the time of the Society, I shall content myself with a condensed statement of the present obstetrical doctrines and practice. To discuss the subject in full, to give the various arguments for and against each principle enunciated, to do full justice by quotations and references, to each contributor to obstetrical science, would extend this paper beyond those reasonable limits, proper for a report to be read before a Society at its annual session.

I shall first speak of the action of ergot, and its use and abuse in labor. There is a peculiar fitness in the effort on the part of this Society, to accurately determine the indications and contra-indications for the use of this article in parturition, as to a former resident of the city where the annual meetings of the Society are always held, who was also for four years its President, belongs the merit of having first called the attention of the Profession to its oxytoxic properties. It is now half a century since the letter of Dr. John Stearns,* to Dr.

**Account of the pulvis parturiens: a remedy for quickening child-birth.* In a letter from Dr. John Stearns, of Saratoga County, to Dr. S. Ackerly, dated Waterford, January 25, 1807, is the following narration :

“In compliance with your request I herewith transmit you a sample of the *pulvis parturiens* which I have been in the habit of using for several years, with

Ackerly, was published, and the use of ergot in obstetric practice dates from this period. In the Transactions of the Society there have been published, also, two excellent papers on this article, which have been of great value to the profession. In vol. 3, Dr. S. Chevasse has a paper "on the Injurious effects of Ergot," and in vol. 5 was first published the classical "Observations on Ergot," by Dr. J. B. Beck.

The influence of ergot in inducing uterine contractions in the parturient woman is at the present day well known to the profession. These contractions differ from the normal efforts of the uterus to expel its contents, in that they are continuous, not recurring at intervals. Its effects are manifest in a very short time after its administration, the periods varying in different patients from five to twenty-five minutes. In most cases there is a marked diminution in the frequency of the maternal pulse, following its administration, but the pulse becomes quicker, and remains so, after its immediate action has ceased. In a majority of cases, also, a marked decrease in the pulsation of the foetal heart follows its exhibition. This is succeeded after some time by an irregularity in its beats, which irregularity continues, more or less, until the sounds intermit, and at length, after a variable period, become inaudible. Dr. Hardy states, that in those cases where the number of pulsations have been steadily reduced below 110, and at the same time with intermissions, the child will rarely if ever be saved, although its delivery should be effected with the greatest possible speed.

the most complete success. It expedites lingering parturition, and saves to the accoucheur a considerable portion of time, without producing any bad effects on the patient. The cases in which I have generally found this powder to be useful, are when the pains are lingering, have wholly subsided, or are in any way incompetent to exclude the foetus. Previous to its exhibition it is of the utmost consequence to ascertain the presentation, and whether any preternatural obstruction prevents the delivery, as the violent and almost incessant action which it induces in the uterus precludes the possibility of *turning*. The pains induced by it are peculiarly *forcing*, though not accompanied with that distress and agony of which the patients frequently complain, when the action is much less. My method of administering it is either in decoction or powder. Boil half a drachm of the powder in a half a pint of water, and give one-third every twenty minutes till the pains commence. In powder I give from five to ten grains; some patients require larger doses, though I have generally found these sufficient.

"If the dose is large it will produce nausea and vomiting. In most cases you will be surprised with the suddenness of its operation; it is, therefore, necessary to be completely ready before you give the medicine, as the urgency of the pains will allow you but a short time afterwards. Since I have adopted the use of this powder I have seldom found a case that detained me more than three hours. Other physicians who have administered it concur with me in the success of its operation.

"The *modus operandi* I feel incompetent to explain. At the same time that it augments the action of the uterus, it appears to relax the rigidity of the contracted muscular fibres. May it not produce the beneficial effects of bleeding without inducing that extreme debility which is always consequent upon copious depletion? This appears to be corroborated by its nauseating effects on the stomach, and the known sympathy between this viscus and the uterus.

"It is a vegetable, and appears to be a spurious growth of rye. On examining a granary where rye is stored, you will be able to procure a sufficient quantity from among that grain. Rye which grows in low, wet ground, yields it in greatest abundance. I have no objections to your giving this any publicity you may think proper."

Now, there are some cases where there is a deficiency of contractile energy on the part of the uterus, and the ergot is a precious resource; but no occasions in obstetric practice require a nicer discrimination or a more accurate diagnosis. We are frequently called upon to decide between the use of agents calculated to excite contraction, and those which have a directly opposite effect, and to determine whether it be better to rouse the energies of the uterus or to resort to manual or instrumental assistance. The safety or destruction of our patient may depend upon our decision. As a means of assisting labor, ergot is admissible only in cases of inertia of the uterus. The differential diagnosis between *inefficient* action of the uterus, and *impotent* action, is therefore of great importance, and sometimes it becomes a question of great difficulty. But there are certain requisites for the admissibility of the drug, which may, at the present day, be regarded as having been established by the experience of the profession.

1st. There must be no mechanical obstacle to delivery. This will exclude all cases where there is disproportion between the size of the foetal head and the pelvic cavity, all cases where there is even the slightest pelvic distortion, all cases of mal-presentation, and all cases where the obstacle to delivery results from rigidity of the soft parts.

2d. The first stage of labor, viz., dilation of the cervix, must be fully completed. The action of this drug is specially directed to the body of the uterus, and not to the cervix. The physiological functions of the cervix are entirely distinct from those of the body of the uterus, not only when the organ is in the nongravid state, but also during gestation and at the time of parturition. The phenomena of the first stage of labor pertain to the cervix, those of the second to the body of the uterus. Now, however desirable it may be to overcome delay in the first stage of labor, the attempt to effect this by premature development of the phenomena belonging to the second stage, is attended with great danger, as will be subsequently shown. The only exception to the law, that the first stage of labor must be fully completed, is found in some cases of partial placental presentation, which will hereafter be examined.

3d. The second stage of labor must be so far advanced that the labor can be terminated by efficient uterine action within one hour. The reasons for this law are based on considerations relative to both mother and child. As regards the mother, it requires no elaborate argument to prove that the violent, persistent, and continuous compression of the soft parts beyond this period of time, must be attended with great hazard. Professor Meigs, in the following quotation, has, with his usual felicity of expression, thus made this point: "A labor is effected by the contractions of the muscular fibres of the womb, aided by that of the abdominal muscles. If all the powers employed in a labor could be accumulated in a single pain, lasting as long as all the natural pains do, no woman, probably, could escape with life from so great an agony, except that small number who are met with, and whose organs, happily for them, make no resistance, but open spontaneously, like a door, to let the foetus out. By a beneficent law of the economy, the pains of

of labor are short, not lasting more than thirty or forty seconds in general, and returning once in three or six minutes." The exhibition of ergot is safe only in those cases where the presentation is natural, the pelvis is well formed, the os uteri well dilated, the vagina and vulva lax and moist, and in short *everything is prepared for delivery, nothing being wanting but efficient action of the uterus*. The dangers resulting from its use are, first, *rupture of the uterus*. In the most excellent monograph on this subject by Dr. J. D. Trask, of White Plains, the imprudent use of ergot is mentioned as one of the prominent causes of this accident, and quite a number of cases are referred to in illustration of the fact. Dr. Trask very justly remarks, "the medical journals, for obvious reasons, contain but few cases of rupture from the imprudent administration of ergot. There can be no doubt that the injudicious exhibition of this drug has been the source of infinite mischief. It is difficult to obtain data upon this subject, for few in whose practice such cases occur would be disposed to report them, and those met with in consultation practice are kept secret from motives of delicacy." The number, however, of such cases that have been reported are sufficient to show that this is by no means an unfrequent cause of this fearful accident. Laceration of the os uteri is another result of the injudicious use of this article. Rupture of the perineum is also a frequent consequence. Dr. Barnes mentions, also, prolapsus and procidentia of the uterus and bladder, as resulting directly from the violent dislocation occasioned by ergot contractions. Other injurious effects upon the mother's system, besides these direct lesions, have been ascribed to the ergot.

Dr. Hardy says, that in several cases where the circulation of the patient had undergone depression from the action of ergot, the effect continued for several days, notwithstanding that, in some instances, inflammation of the uterus followed the delivery, and the uterine tumor not unfrequently remained much larger than natural, even when there was no inflammation. He quotes also, the eminent authority of Dr. Johnson, to the fact that "the volume of the uterus is often found much greater than after ordinary labor, imparting to the hand almost the feel of a uterus, before the expulsion of the placenta."

The fatal effects of ergot on the child, when the delivery is not completed within a limited period of time, are now established beyond all controversy. Dr. Hardy found that in forty-eight cases where the ergot had been given, thirty-four children were still-born—nearly three-fourths. The concurrent testimony of those of the profession, who have not only had experience in the use of this article, but have honestly watched the results on the child, confirm the evidence as to the great danger in its use, although the proportionate mortality is not usually so great as that mentioned by Dr. Hardy. I may mention, as an interesting historical incident, that I have been informed, from an authentic source, as I suppose, that Dr. Stearns, to whom the profession is indebted for the introduction of an article that obstetricians at the present day would find difficult to dispense with, suffered so much in his practice from the mortality among children, charged to the use of this article,

that he left Albany and removed to New York on this account.* It is probable enough, that the enthusiasm of a discovery may have led to some errors in practice, before an accumulated experience had established the laws which should govern its administration, and it is also probable that rival practitioners did not hesitate to take advantage of any such impression. But as showing that Dr. Stearns fully understood the action of the article, and to a great degree appreciated the contra-indications for its use, I again refer to the letter of Dr. Stearns to Dr. Ackerly. (See note, page 39.)

A variety of opinions have been entertained, as to the action of the ergot on the child. Some have believed that it possesses some special noxious property, which is absorbed and transmitted to the child. Others think it acts perniciously, owing to the uninterrupted pressure of the uterus upon the brain of the child, or that the long-continued compression of the trunk, by the uterus, produces a fatal cerebral congestion; but at the present day the best received theory is, that the violent and continued ergotic contractions arrest the utero-placental circulation, and the death of the fœtus results from the want of proper oxidation and decarbonization of its blood.

I have thus far spoken of the value of ergot as a means of assisting delivery, and it will be readily seen that I would restrict its use to a *very limited* class of cases. I will now examine its value for other purposes, connected with parturition.

1st. *As a means of preventing hæmorrhage.* We are safe from the dangers of post partum hæmorrhage only in those cases where the permanent contraction of the uterus is secured. Ergot has often and naturally been relied upon to obtain this result, and of its value for this purpose there can be no question, except in those cases where the labor has been so prolonged that not only the nerve power of the uterus, but also that of the general system, has been exhausted. In these cases our greatest security is found in the liberal use of opium, or of some of its preparations. The time when the ergot should be administered as a means of preventing hæmorrhage, is a matter of a good deal of importance. Some have advised that it should be given when the head of the child is on the perineum, and about to be expelled. Others delay its use until after the head has cleared the os externum, but before the shoulders have passed. McClintock and Hardy prefer to give it as soon as the insertion of the cord into the placenta can be felt. Dr. Hardy remarks, that, "by giving the ergot before the child has been expelled, some time may be gained; but should the placenta be morbidly

* From Dr. Willard's Semi-Centennial Address before the Medical Society of the County of Albany, published in the Transactions of 1857, we copy the following :

"In a somewhat extensive and successful practice, Dr. Stearns became unfortunate in losing a series of cases of puerperal fever. It was not then, as now, understood that this disease is contagious, and may be communicated from one lying-in patient to another by the hand or clothing of the accoucheur. The mystery of its appearance in his practice only, and the fatality of its termination, keenly oppressed his truly sensitive mind, and led him at length to abandon his practice in this city."—*Com. of Pub.*

adhering to the uterus, the difficulty of introducing the hand for its removal will be greatly increased. By adopting the third plan this source of apprehension is avoided." But morbid adhesion of the placenta is not a very frequent occurrence, and in those cases there is reason to apprehend danger on account of previous hæmorrhages. I should not hesitate to use the ergot at an earlier period.

2d. *As a means of arresting hæmorrhage.* In partial presentation of the placenta, the ergot is often strikingly beneficial in controlling the hæmorrhage. It is in these presentations only that I would ever use ergot in the first stage of labor. The tampon is to be relied upon, until the os is considerably dilated; but this is no longer efficient when the os is tolerably open, thin and soft, as the yielding membranes will not afford a counter-pressure. The membranes are now to be ruptured to allow the head to descend so as to compress the placental vessels; and now, to secure the permanent tonic contractions of the uterus, and thus prevent further loss, the ergot becomes invaluable.

The ergot has been strongly recommended by some as a means of arresting the hæmorrhage which occurs after the delivery of the child, but before the expulsion of the placenta; and if we could always be sure that the retention was the result of uterine inertia alone, the propriety of its use would never be doubtful. The indication in these cases is, the prompt removal of the placenta. Now, if the placenta is morbidly adherent, the use of the ergot would render its detachment much more difficult. If, on a careful examination, this condition is ascertained to be absent, the ergot may be used with advantage, not so much for the purpose of facilitating the expulsion of the placenta, (for this must be effected at once by a manual operation,) as for the sake of securing the permanent contraction of the uterus after its delivery.

As regards the hæmorrhage which occurs after the delivery of the placenta, the distinction made by various authors (first clearly pointed out, as I believe, by Dr. Beatty, of Dublin,) as to the two opposite conditions which favor this formidable accident, I regard as very important. "The first is the full, plethoric habit, where the heart is in strong and rapid action, and all the vessels are gorged with blood, as is indicated by the flushed skin, headache, thirst, and bounding pulse. The second, is the weak, delicate, lax fibred state, characterized by pale countenance, spare limbs, slow and weak labor pains, and feeble, though it may be rapid pulse." In the first class, hæmorrhage within certain limits may be beneficial, and it is in these cases that the use of ergot proves especially valuable, from its known power of lowering the circulation, as well as of securing the permanent contractions of the uterus. We have no fear of its depressing influence, and we can rely with a good deal of certainty upon its power, in these cases, of securing the latter object.

But the propriety of its use in hæmorrhage occurring in the second, is often doubtful. In these cases, it does nothing to excite the contractions of the exhausted uterus, its depressing influence producing just the opposite result. I must especially protest against the large doses which are in these cases sometimes administered, with the vain

hope of stimulating the exhausted organ, the only effect of which is, still more to debilitate it. I can positively aver, that in more than one instance I have seen death result from its injudicious administration under these circumstances. Without stopping to describe the various methods to arrest the hæmorrhage, which should be resorted to in these cases, I will simply remark, that the ergot should never be administered except in conjunction with opium, or until the exhausted powers of the nervous system have been restored by the use of opium. "In these cases," says Dr. Lever, "where there is great exhaustion, alarming syncope, great irritability, severe vomiting, and pain, evident and undeniable indications of great depression of the sanguiferous and nervous systems, or; to use the graphic language of Dr. W. Griffin, 'when the countenance is sunk, the eye hollow and glassy, the lips blanched, the skin cold, and the whole person corpse-like; when the pulse is all gone at the wrist, when the beat of the heart is scarcely perceptible, and stimulants, even brandy, are vomited or useless, opium will act like magic, and save the patient from an untimely grave.' But to do good, it must be exhibited in full doses of one or two drachms of the tincture, or three or four grains, repeating two grains every half hour or hour until the pulse becomes distinct, the breathing calm, and the jactitation allayed; whatever may be the 'ratio medendi,' whether the congestion produced in the brain be what is necessary to maintain the proper tension of the cerebral vessels, whether it restore the loss of nervous power in the brain itself, is still a point *sub judice*; but no man of much obstetric experience, will deny its value under the circumstances thus detailed. As pertinent to the foregoing remarks, I may be excused for making the following quotation from Prof. Murphy: 'The paradox has been proposed, how can opium cause the uterus to contract in hæmorrhage and to relax in other cases? for instance, when given for this purpose in arm presentations. The same medicine cannot produce opposite effects on the same structure. In this query, the condition of the nervous system, a most essential element, is totally overlooked, and the influence of opium, where nervous irritability is almost exhausted, is compared with its effects when the same power is excited to the greatest degree. It is assumed that the operation of opium must be the same when the uterus has lost all power to contract, and when it has contracted spontaneously. The question, therefore, might be easily answered, by stating that opium is both a stimulant and sedative, and that one effect or the other is produced, according to the relation existing between the nervous energy of the uterus and the dose of the medicine given. If nervous irritability be not impaired, or if it be increased, a very small dose of opium would stimulate—a larger one would exhibit its sedative effects; but, if on the contrary, that irritability is destroyed, and the uterus atonic, the same large dose would only act as a stimulant; nor will the sedative property of the medicine be observed until the nervous energy is restored. In the use of opium, therefore, strict attention should be paid to the degree of hæmorrhage, and its effect upon uterine contractability. When the loss of blood is slight, or at least not sufficient to impair the tone of the

uterus, a large dose of the opium would be dangerous, lest it might act as a sedative, overcome the influence of the nerves, and cause the uterus to relax. When the loss is great, and followed by exhaustion of the uterus, then the very same quantity of the medicine will produce an opposite effect—it will act as a stimulant, and cause contraction of the uterus.”

As a remedy for retention of urine after labor.

This is generally the result of a temporary paralysis of the muscular coats of the bladder, arising from over-distension during labor. For some years I have not had occasion to use the catheter on account of this condition, the ergot in every instance having proved efficient. I usually give the tincture in doses of 20 drops, repeated every half hour, until the bladder is relieved.

The forceps in labor.

It is not my province in the present paper either to give the history of the discovery of these instruments, or to describe their mode of application, but solely to discuss the indications for their use, the dangers attendant upon their use, and thus to contrast their value in labor, as compared with the use of ergot. There is a great difference in the teaching of different obstetric schools, relative to the indications for their use, and the comparative frequency with which they are required. Before discussing the disputed points, let us briefly examine those where all agree:

1st. As to the functions of these instruments, all are agreed, that they are to be used as a means of assisting the uterus to expel its contents, by their tractive powers, and also for the purpose of correcting any defective mechanism in the labor. Traction alone, is far from being the most important aid to be accomplished by them. Flexion, extension, or rotation of the head is in many cases more important and necessary than traction.

It is unnecessary for me here to insist upon the great importance of thoroughly understanding the normal mechanism of labor. I suspect that by far the most frequent mistake made in the use of the forceps, is in employing them simply as tractors, and that to this cause is due most of the unfortunate results which have followed their injudicious use.

2d. All schools teach that the forceps are to be used where the conditions of the labor will permit, in all those cases where the powers of nature have been well ascertained to be insufficient to accomplish the delivery with safety to the mother and child. I will subsequently allude to the differences of opinion as to the conditions which admit the use of the forceps.

3d. All agree that, where the forceps afford the most feasible and safest mode of accomplishing the delivery, they should be used in all those accidents of parturition which require a speedy termination of the labor.

Thus, in severe puerperal hæmorrhage, it is a settled rule of practice, that delivery should be speedily effected by means of the forceps, when

the os is well dilated, the head is in the pelvic cavity, and there is no mechanical obstacle either from pelvic deformity, tumors in the cavity, or abnormality of the foetal head. So in puerperal convulsions, if after a careful investigation, it is evident that the convulsions are excited by the reflex irritation of the peripheral extremities of the nerves of the cervix uteri, or of the soft parts, there is no hesitation as to the propriety of using the forceps at once, if their use is practicable. For example, where the pains are feeble, infrequent, and inefficacious, or even if the contractions are energetic, but the convulsions are frequent and prolonged, with coma in the interval of the paroxysm, the safety of both the mother and child require the immediate application of the forceps.

When rupture of the uterus occurs, the os being dilated or dilatable, and the head remaining in the pelvic cavity, the forceps must be applied at once and speedy delivery effected.

In cases of prolapsus of the cord, accompanying vertex presentations, the safety of the child requires that delivery by the forceps should be accomplished before the pulsations of the cord cease. It would be a waste of time to discuss these points, as there is no difference of opinion in the profession as to the propriety of the rules above enumerated.

Dangers resulting from the use of the forceps.

The only danger to the mother results from the increased liability to hæmorrhage from inertia, on account of the rapid evacuation of the contents of the uterus, and this liability can always be prevented by proper precautions, and the use of the known means to secure immediate and permanent contraction of the organ. Injury to the soft parts of the mother can only result from the abuse of the instruments, and not from the proper use of them. The rules for their use are now as well established as any principles in obstetric practice, and to condemn any resource of art on account of its liability to abuse, is not only illogical, but opposed to the progress of science. This point will be examined more in detail in a subsequent part of this paper.

The dangers to the child are more numerous. The necessary compression by the instrument may inevitably cause contusion, laceration, and even partial separation of the scalp, and possibly cerebral effusion, depression and fracture of the cranium. These dangers are not to be forgotten in any case, when the propriety of using the forceps is under consideration; but they are not to outweigh the question of safety to the mother. Quite recently the attention of the profession has been called to the danger of facial paralysis in the child, resulting from the pressure of the blade on the seventh pair of nerves. This accident is very rare, and in all cases hitherto reported the paralysis fortunately has proved only temporary in its character.

I have thus far spoken only of those points in regard to which all obstetricians are agreed, as to the indications for the use of the forceps, and the dangers attendant upon their use. There remains to be discussed the rules for practice, which have not yet been established, and the great diversity of opinion will be striking, from the following

statement as to the comparative frequency with which these instruments are used by the most celebrated obstetricians in Europe. Ramsbotham used the forceps once in seven hundred and twenty-nine cases, Joseph Clark once in seven hundred and forty-two, Collins once in six hundred and seventeen, Churchill once in five hundred and forty-six, Lever once in five hundred and eighteen, Simpson once in four hundred and seventy-two, Lachapelle once in two hundred and ninety-three, Beatty once in one hundred and thirty-one, Merriman once in ninety-three, Nægele once in thirty-one, Carus once in fourteen, Siebold once in seven, G. Hamilton once in seven. One explanation of the great difference is found in the fact that the great majority of British obstetricians resort to craniotomy in all those cases where the head of the child has not passed completely down into the pelvic cavity, while the continental obstetricians in the same class of cases would use the forceps. Thus Collins used the perforator once in one hundred and forty-one cases, Churchill once in one hundred and forty-nine, while Nægele used the perforator once in one thousand seven hundred and eleven cases, Mad. Lachapelle once in one thousand eight hundred and fifty-four, and Siebold once in two thousand and ninety-three. Professor Simpson has shown, from a comparison of the statistics of the three great lying-in hospitals of Vienna, Paris and Dublin, that the proportion of cases of operative or artificial delivery is very nearly the same: "In the Vienna hospital, under Beer, one out of every fifty-five women was delivered either by the forceps, vectis, craniotomy or version, and during the time of Dr. Arneth's report, one out of every sixty-nine cases. In the Paris hospital, Mad. Boivin reports one out of every sixty-one labors as requiring delivery by operation. Mad. Lachapelle found that in the ten years preceding 1810, one in fifty-seven mothers were delivered artificially, and during the subsequent ten years, one in eighty-two required such a procedure. In the Dublin Hospital, Dr. Collins reports one out of every eighty-six women as having been delivered artificially, and Drs. McClintock and Hardy describe one out of every fifty-two of their cases as having been similarly assisted." The difference of practice, then, consists not so much in difference of opinion as to the propriety of rendering artificial aid, as in the choice of means for this purpose. The laws which must govern the decision as to the choice of means, cannot be drawn from statistical tables, but must be deduced from certain general principles; and following these laws, it may happen that one who has a large consultation practice may find the forceps necessary once in every ten cases of labor that he meets with, while if his consultation cases are excluded, the proportion of forceps cases will not be more than one in a hundred. Or again, an obstetrician may meet with five cases requiring the forceps in every hundred cases of labor, during the first ten years of practice, when a large percentage of his cases are primipara, when in the second ten years he may not find the forceps necessary oftener than once in a hundred cases, as the proportion of primipara cases changes in the same ratio. I think it sufficient merely to state the above proposition to show the fallacy of relying upon statistical tables to establish the principles which should govern practice.

It is, however, evident, from the statistics before given, that there is a wide difference of opinion among our obstetrical authorities as to the class of cases requiring the forceps, one class never using them except when the evidence of positive arrest at the lower strait is already demonstrated, by the time which the labor has occupied, and the urgent symptoms accompanying it. They require from six to eight hours of ineffectual struggle on the part of the uterus, and the development of symptoms indicative of danger either to mother or child. Without stopping to discuss in detail the special teachings of different authorities, I may say that the plain, practical question to be decided in the lying-in room is, which is safer for mother and child, *the use of instruments or further delay?* The dangers resulting from the use of the forceps have already been noticed, and in my judgment are sufficiently strongly enforced in our systematic treatises, while the dangers of delay have received but slight attention, as compared with the importance of the subject.

Prof. Simpson has shown that the maternal mortality attendant upon parturition increases in ratio progressive with the increased duration of the labor. He has made out the following table, showing the proportion of 138 natural deaths in relation to the duration of labor in 15,850 cases of delivery recorded by Dr. Collins:

Duration of labor.	No. of deliveries.	No. of deaths.	Proportion of deaths.
Within one hour.....	3,537	11	1 in 322
From 2 to 3 hours.....	6,000	26	1 in 231
From 4 to 6 hours.....	3,875	29	1 in 134
From 7 to 12 hours.....	1,672	21	1 in 80
From 13 to 24 hours.....	502	19	1 in 26
From 25 to 36 hours.....	134	8	1 in 17
Above 36 hours.....	130	24	1 in 6

So also the infantile mortality attendant upon parturition increases in ratio progressive with the increased duration of the labor, as is shown in the following table of the proportion of still births, in reference to the duration of labor in 15,850 cases of delivery:

Duration of labor.	No. of deliveries.	No. of still born.	Proportion.
Within 2 hours.....	7,050	347	1 in 23
From 3 to 6 hours.....	6,362	346	1 in 18
From 7 to 12 hours.....	1,672	151	1 in 11
From 13 to 24 hours.....	502	88	1 in 6
From 25 to 36 hours.....	134	42	1 in 3
Above 36 hours.....	130	71	1 in 2

It will thus be seen that the dangers of delay, both to mother and child, becomes a question of the gravest importance. Among our systematic authors, Burns has more strongly, and I think more truly pointed out these dangers than any other of our English writers. He says the continued pressure of the head on the soft parts is productive of further diminution of the capacity of the pelvis, for inflammation is

excited, and at the same time the return of the blood by the veins is obstructed, and of serum by the lymphatics. This impairs the power of the soft parts, and renders the inflammation of the low kind, so that even when delivery is accomplished sloughing succeeds, whereby very dreadful or loathsome effects are produced, if these, indeed, be not prevented by the death of the patient, in consequence of a similar low inflammation being communicated to the peritoneum. This swelling of the parts contained within the pelvis may take place, although the head be not impacted, but the head cannot long be impacted without producing that.

Here, then, is one effect of a most formidable and alarming nature, which we apprehend in the case under consideration. But this is not the whole of the evil; for the upper part of the vagina, or the cervix uteri, may be lacerated in consequence of this debilitated state, or any part of the uterus may be ruptured by strong and spasmodic action; or uterine or peritoneal inflammation may be excited previous to delivery, proving fatal in a few hours after labor is terminated; or hæmorrhage may occur, to a fatal degree, from want of energy in the uterus after delivery; or general inition and exhaustion are produced; the pulse becomes frequent, and at last feeble; the mouth parched; the skin hot; the mind confused, and the strength sunk; or the powers of life may be worn out, so that the patient shall die without any decided inflammation or disease referable to a common nosological system. In the Clinical Midwifery of Dr. Robert Lee, who is no advocate for the frequent use of the forceps, and, indeed, who never uses them except when the head is at the lowest strait, occurs the following statement, which seems to me very significant: "In thirty-eight cases of this report the labor continued from forty to seventy hours. In the cases of spontaneous rupture of the uterus and convulsions only was the delivery effected before the labor had lasted upwards of thirty hours. In a very large proportion of the cases the difficulty arose from distortion, or a contracted state of the pelvis. Rupture of the uterus took place in three before perforation; and the inflammation and sloughing of the uterus, vagina and bladder, which proved fatal in eight hours, were chiefly or solely produced by the long-continued violent pressure on the soft parts, by the head of the child before it was opened and extracted. In those who recovered with vesico-vaginal fistula, or contraction of the vagina from cicatrices, the unfortunate occurrence arose from craniotomy being too long delayed." In eighty-seven of Dr. Lee's cases, where craniotomy was performed, local lesions on the part of the mother are noted as having occurred in several instances. Out of the eighty-seven cases, eight, or about one in every ten, suffered from vaginal inflammation and sloughing; four, or nearly one in every twenty, were left with vaginal fistula. In a paper on the subject of "Urethro-vaginal and vesico-vaginal Fistulas," published in the North American Med. Chir. Review for July and November, 1857, by Dr. N. Boseman, of Montgomery, Alabama, he states that in nineteen cases of these fistulas "the shortest duration of labor in any one of these cases was thirty-six hours, and the longest eight days; the average being about

four days. In nine of these cases instruments were employed to aid in the delivery; in six no artificial means were resorted to." He adds: "Judging from the nature of the fistulous openings in the cases where instruments had been used, and where they had not, I am forced to the conclusion that nearly, if not all of them, were the result of sloughing." In further confirmation of the views advanced as to the danger of delay in labor, I add a note from Dr. Sims, who has undoubtedly had a larger experience in the lesions resulting from parturition than any man living:

79 MADISON AVE., Jan. 30, 1858.

My dear Doctor—Out of about one hundred and twenty cases of vesico-vaginal fistula, I have had time to look over the histories of only seventy. Of these forty-one were delivered by instruments, the rest being left to the unaided efforts of nature.

These fistulas are sometimes produced by laceration, but most commonly by a slough which is generally in proportion to the duration and degree of impaction, whether instruments are used or not. Instruments are often blamed for injuries which are produced, not by their use, but by the want of their timely application; in other words, by the prolonged pressure resorted to.

The cases left entirely to the unaided efforts of nature, other things being equal, suffered the greatest loss of structure; those in which instruments were used, sustained, as a rule, less loss in proportion as they were resorted to early or late, thus showing that the mischief was the result of prolonged pressure.

With great regard,

Ever sincerely yours,

J. MARION SIMS.

Prof. FORDYCE BARKER.

In conclusion, I must state my conviction that the more enlarged is the clinical experience, and the more accurate the observation, the more rarely will the ergot be used before delivery, and furthermore, that the fear of delay in labor will be greater than the apprehension from the use of forceps. McClintock and Hendy gave the ergot in the second stage on account of inertia in nineteen cases, after which it was necessary to deliver with one or both blades of the forceps. In ten of these cases the child was lost. The death of the child could not have resulted from the use of the instruments, and must have been due either to the ergot or the protracted labor.

Toxic and Medicinal Properties of Nitrate of Oxyde of Glycyl. By A. G. FIELD.

In the evening of February 3, 1858, I was conversing with a homœopathic practitioner, when he mentioned a medicine which possessed peculiar and extraordinary qualities, some of which he described as having affected himself, though he had taken it in very minute quan-

tities. I laughed at his credulity, and offered to take as much as he pleased, upon which he let two drops of what he called the first dilution of glonoine fall on my tongue. After swallowing this small quantity of fluid—I was assured the quantity did not exceed two drops—I asked what effects I must expect, but was told to wait and observe for myself. I then purposely conversed on other subjects. In about three minutes I experienced a sensation of fulness in both sides of the neck; to this succeeded nausea, and I said, “I shall be sick.” The next sensation of which I was conscious, was as if some of the fluid was being poured down my throat, and then succeeded a few moments of uncertainty as to where I was, during which there was a loud rushing noise in my ears, like steam passing out of a tea-kettle, and a feeling of constriction around the lower part of my neck, as if my coat were buttoned too tightly; my forehead was wet with perspiration, and I yawned frequently. My intellects returned, however, almost immediately, and I remember saying, “This has nothing to do with homœopathy, but it has to do with a very powerful poison; there are more things in heaven and earth than are dreamed of in the philosophy of some of us.” I also reproached my friend for not having tested the anæsthetic power of the medicine, by inflicting a slight wound on me. I need scarcely say I am thus minute in my description of what occurred, that an accurate idea may be conveyed of the actual effect produced on me, as well as to justify the uses to which I have since put the medicine. When these sensations had passed off, which they did in a minute or so, they were succeeded by a slight headache, and dull heavy pain in the stomach, with a decided feeling of sickness, though without any apprehension that it would amount to vomiting. I lay on a sofa, feeling rather languid, but talking cheerfully, conscious at the same time that I could very well exert myself both mentally and physically, if I liked, but that it was more pleasant to be idle. This condition lasted about half an hour, at the end of which I was quite well, and walked home, a distance of half a mile, with perfect comfort. I slept soundly from one o’clock till six, when I was called up, having a slight amount of general headache, but not such as I should have regarded but for the recollection of last night’s adventure.

The physician to whom I am indebted for this over-dose, told me, that when his first impression that I was shamming had passed off, my condition caused him the greatest alarm, for he really thought he had killed me. I learn from him that my head fell back, my jaw dropped, I was perfectly white, breathing stertorous, and no pulse at the wrist for the space of about two minutes. He immediately rushed to a closet, and procured some stimulant, which he poured down my throat. I had never been in better health and spirits than on the day of this occurrence, and had taken nothing for hours but a little cold tea.

This same first dilution of glonoine consists of one drop of a peculiar chemical compound, dissolved in ninety-nine drops of rectified spirit; and glonoine itself I learn to be a nitrate of oxide of glycylic acid, prepared by adding nitric and sulphuric acids to glycerine, the temperature of the fluids being kept down by a freezing mixture.

My own personal experience of the very marked and peculiar effects produced by this drug made me anxious to test its qualities still further. As a direct sedative to the nervous system, without possessing any stimulating or permanently depressing qualities, without affecting secretion, together with its power of subduing muscular action, it appeared to promise to become an invaluable agent in the treatment of a large class of nervous and spasmodic diseases. By a strange perversion of all reason, as it appears to me, my friend, who is an enthusiastic disciple of Hahnemann, began to rejoice, when all appearance of danger had passed, that he had discovered what he considered a splendid remedy for apoplexy, on the principle of *similia similibus curantur*. I leave him to the enjoyment of his opinions, feeling only grateful that he did not give me a second dose to cure me on a like principle, while I consider the best mode of applying the drug in a precisely opposite direction. With this object I procured some of the first dilution of glonoine from a homœopathic chemist, and proceeded to institute a series of experiments before applying it to the treatment of disease.

Anxious to inform myself on the effects of a smaller dose, I got a medical friend to join me. We each touched our tongue with the cork moistened with glonoine solution, and recorded the sensations produced by it. They were nearly as possible identical—a sense of constriction of the neck, slight nausea, with fulness, and some pain in the head, as if the brain were expanding. But I think my friend must have experienced more decided effects than I did, for he declared he would never take any more. The sensations lasted about five minutes, and then passed off without leaving any unpleasant effects.

Animals, as far as my experiments have extended, appear to be almost unaffected by this drug, which acts so powerfully on the human organization.

I have repeatedly given it to cats, rabbits, and other animals, in doses varying from two to thirty drops, without producing any immediate effect. One rabbit had diarrhœa an hour after, and the cats appeared cold and lazy all the next day. Some smaller animals, such as mice and pigeons, died after having taken the glonoine some hours, but they appeared to have suffered from alcoholic poisoning, rather than from any symptoms at all resembling those produced by the glonoine on the human subject.

Disappointed in my endeavors to gain any information from experiments on animals, I still thought I had seen and felt enough of the physiological action of the medicine to justify my cautiously employing it in the treatment of disease.

“Case 1.—Mrs. L., aged 68, had for some days been under treatment on account of a very painful nervous affection, which she designates spasms. This recurred regularly every three hours, and is described by herself and attendants as most distressing, and my own observation of one or two seizures fully bears out their statements. Each attack commenced suddenly with intense pain in the epigastrium, extending up to the top of the chest, and then down the inner

side of the left arm; it lasted about half an hour, and then subsided, leaving her exhausted, but otherwise well in the intervals. They recurred during the night with equal regularity. She was at the same time the subject of uterine derangement. Fœtid ammonia, assafoetida, chloroform, valerian, hyoscyamus, camphor, and prussic acid, with counter-irritation, having failed to give her relief, I had recourse to morphia every two hours, which relieved her only after several doses had been taken, and partial narcotism had been produced. She would then enjoy a few hours' peace; but the attacks always returned—when the influence of the morphia had passed off.

"Feb. 5th.—She had slept well all night from the morphia which had been taken in the previous twenty-four hours, and was awake in the morning of this day by one of her painful attacks; but it yielded in three minutes to a quarter of a drop of the solution of glonoine in a dessert spoonful of water. After this she had four more attacks before noon. For three she took the same medicine, and was quickly relieved; but having exhausted her supply when the fourth occurred, she suffered as much as on former occasions.

"My daily notes of this case are nearly a repetition of what I have just stated, till the evening of the 10th, when she appears to have taken an over-dose, which produced effects very similar to those from which I suffered on the 3d. This gave rise to so much alarm, that she refused to take any more. I therefore again had recourse to morphia; but she suffered so severely the next day and night, that she begged to be supplied with the glonoine again, and no sooner had she taken it than relief was obtained. The dose has been continued every four hours, with the happiest results. Her attacks now are reduced to two or three in the twenty-four hours, and always readily yield to the quarter of a drop of solution of glonoine. The only other treatment she has required has been a few ten-drop doses of the tincture of *Cannabis indicus*, to relieve uterine hæmorrhage.

"*Case 2.*—Mrs. W. had suffered severe pain from a decayed tooth for several hours. The pain was so great, that she would gladly have had it extracted; but her dentist was anxious to preserve it. In the evening she begged me to give her something, for she said, 'It cannot be made worse.' I placed about half a drop of the solution of glonoine (1 per cent.) on her tongue. Soon after she experienced a pulsation in the neck, fulness in the head, throbbing in the temples, and slight nausea. The toothache subsided, and she became partially insensible, disliking very much to be roused. When fully sensible, she had headache, but the toothache was gone. Mr. W. remarking, 'Certainly that medicine allays pain wonderfully.' She slept unusually well that night, and experienced no ill effects in the morning.

"*Case 3.*—Elizabeth M., a stout healthy young woman, had severe toothache. I was applying a very small piece of lint dipped in glonoine solution, (1 per cent.,) when it accidentally fell into her mouth and was swallowed. In about five minutes, after feeling giddy and sick with headache, she became insensible. Her countenance, naturally florid, was unaltered, breathing tranquil, pulse full, and rather quick-

ened. Knowing, as I did, that she had taken but a small quantity of the drug, I kept my fingers on her pulse, and allowed myself time carefully to observe her condition before applying a restorative. I tested her sensibility to pain, and called loudly to her, but without producing any impression. Directly I detected a slight failure in the pulse, in about three minutes after insensibility commenced, she had some stimulant poured down her throat, when she quickly recovered. Some headache was complained of, but the toothache was cured. The next morning she was quite well.

“*Case 4.*—Mrs. R., aged 45, pale, anæmic, with feeble circulation, has for the last month suffered from headache, daily increasing in severity. When I first saw her, February 15, she had had leeches applied to the temples, and had taken drastic purgatives, since which the pain had been much worse, and she could not sleep. I gave her a quarter drop of glonoine solution in colored water every four hours. On seeing her the next day, she expressed the greatest gratitude for the relief the medicine had afforded her, and she said her head was much better after taking the first dose, and she slept four hours. The glonoine was of course given only as a palliative in this case, while iron and generous diet were relied on as a means of effecting a cure.

“I have not yet met with one well-defined case of neuralgic or spasmodic disease in which this medicine failed to afford relief. No vague, over-sanguine expectations are entertained of its power to cure disease where spasm or pain are but symptoms, excepting only in those cases where these consequences themselves become the cause of death, their cause being of a transient nature, and liable to subside if the patient's life can be maintained for a certain time, such as temporary irritation of a nervous centre, or inflammation of such a part, which might terminate in resolution or be subdued by remedies, if existence were prolonged sufficiently for their action; and also in cases where we may suppose symptoms such as spasm may react on their exciting cause, preventing the necessary tranquillity for recovery, the offspring, as it were, maintaining its parent. With such a remedy, may we not look forward hopefully to the treatment of tetanus, hydrophobia, and other similar diseases?”—*Med. Times and Gaz.*, March 20th.

A Clinical Lecture on Pus and Suppuration. Delivered at the Hôpital de la Charité. By M. VELPEAU.

Before you begin to observe diseases, every variety of which is to be met with in these wards, it would be well to study, in a clinical point of view, certain subjects which it is important you should understand, and the more especially so, as they are of such frequent occurrence. But of all these there is none that occupies so important a place, or occurs so frequently, as pus. If the immediate consequence of every solution of continuity, whether surgical or accidental, be effusion of blood, so also is the formation of pus one of its very constant results.

Blood flows out wherever you give it issue; nor is there any part where pus, which may be styled a product of surgery, may not form. In practice it is met with at every step, and its presence is always an index to disease; it is consequently a sign of great value, which may itself, whether maintaining its normal characters or showing evidences of decomposition, become in turn the source of new and formidable symptoms.

Pus has not always the same characters. There is a type—the phlegmonous, *laudable* pus of authors, described as cream-like, white, thick, and unctuous, without flakes or clots, is homogenous and consistent, such as is found on opening abscesses formed in the cellular tissue. But pus varies, besides, according to the nature of the organs in which it is formed. Thus pus in the liver is red or brownish; at the anus it often has the color and odor of fæcal matters; and is modified throughout the whole extent of the mucous coverings by the proximity of these membranes to the organs which they protect, so that the practitioner with an exercised organ of smell may become able to distinguish infallibly whether pus is from the mouth, throat, or larynx, from the air passages, or from this or that portion of the alimentary canal. Pus varies also according to the constitution of the sick. In persons that are sanguine, robust, and abundantly endowed with cellular tissue, it is thick, fat, and creamy; while in the meagre, sickly, and exhausted, its condition is just the reverse—it is serous, clear, and grumous. The pus of bones is clear, yellow, and serous. Cancerous ulcerations and gangrene give rise to a fluid which is a dirty serous discharge mingled with decomposed blood and detritus, rather than a true suppuration.

Pus forms in two sorts of foci that are quite distinct; at one time the focus is the surface of a wound, when the pus is in contact with the external air; at another time it is in the substance of a limb, among the tissues in the natural cavities, the articular capsules, the synovial bursæ mucosæ, the serous cavities, the peritoneum, the pleura, etc., when contact with the atmospheric air is precluded. We shall consider it in each of these two cases, for its history in the one instance is different from what it is in the other. Effused into the interior of the body, and having no communication with the external air—a circumstance of much importance—it is no longer either more or less than a foreign body, soft and liquid, which preserves, unchanged, its primitive characters, and against the infiltrations of which into the neighboring parts nature takes her precautions; hence, some days after its formation, the containing cavity is found to be lined throughout, even to its minutest sinuosities, with a membrane soft to the touch, tomentous, and velvety—the pyogenic membrane, which isolates the purulent focus from the rest of the system. In the shut cavities it is the serous membrane that fulfils the office of the pyogenic, especially in the joints. As the serous membrane covers tissues at different degrees of density, the pus is irregularly and imperfectly confined; hence, sometimes it bursts through its barriers into the neighboring parts; or, as happens in other cases, the parts become greatly distended, giving rise to inflammatory and other formidable phenomena.

Where pus forms on the surface of a wound, being subject to the laws of putrid fermentation from the influence of atmospheric air, it undergoes serious modifications. Not only do the elements of which it is composed become dis-associated, but they form new combinations in virtue of their chemical affinities; hence, new compounds, the nature of which you should understand, are formed—ammonia, sulphurets, sulf-hydrates, various compounds of hydrogen, carbon, &c., presenting so many causes of infection, against the influence of which the system has to re-act in order to defend itself, and of which the surgeon, knowing their formidable consequences, should never lose sight.

Suppuration has a constant tendency to perpetuate and extend itself; the moment pus occupies any part of the body there is reason constantly to fear the implication of the whole system, or at least the formation of new foci in other regions. It is not unlike an enemy besieging some stronghold. You watch it, supposing that there it has concentrated its whole force; but all at once the enemy decamps, only to muster in greater force where least expected. It has its own peculiar strategy, ever ready to take advantage of the least oversight and of every inequality of ground; and when seeming the least offensive becomes suddenly the most destructive. How often, in fact, have we not seen, for example, an abscess following, to all appearance, its march to a regular termination—the suppuration, of good quality, becoming every day less and less, so as to leave no doubt of a speedy cure? How often have we not seen, under such circumstances, repeated suppurations occur in parts distant from the primitive focus in the viscera themselves, and become the definite cause of death, even when you would, some days before, have affirmed that a perfect cure was at hand?

It was in former times supposed that when in the course of a disease there was either a sudden or slow dispersion of pus, and pus was seen collecting in another part, there must be a transportation of pus *proprio motu*; hence the belief in its metastasis. But since these phenomena have been better studied, a more accurate explanation has been given. The secondary suppuration seen in such cases is not the result of any circulatory movement; for neither is the pus nor its elements carried about from one part to another. The pus that has just shown itself is the result altogether of a special and peculiar diathesis, manifested by every individual in whom suppuration occurs, so that he becomes liable, from the very existence of one abscess, to other abscesses in endless succession, and that either during the existence of the first, or long after, in its vicinity or at a distance.

Pus, therefore, engenders pus—a proposition neither new nor questionable. An individual in whom a purulent secretion occurs, let the part involved be what it may, becomes so exposed to the influence of the pus that he may thence become as thoroughly infected as he who, from a single variolous pustule, becomes completely covered with confluent small-pox. Moreover, the notion of pus being transported from one part to another by metastatic action, is refuted by mere attention to the facts. Have we not seen a score of persons die from purulent

infection, whose bodies were in various parts inundated by a mass of pus far more considerable than the primary collection of pus that gave them origin?

Sometimes it happens that pus disappears entirely from a part where it lodged, yet causing no new accident, terminating thus by resolution, when the system is supposed to get rid of it through the instrumentality of the excretories. But in this case, as in the former, the fact is not easily explained. The pus was supposed to be removed either in its state of integrity, or reduced by the veins and absorbents to its primary elements, and thrown thus into the circulating current. But before we can determine the intimate nature of the process, it is plain we must be acquainted likewise with its intimate composition—a subject on which it must be owned we possess nothing very definite. Pus is said to have a special globule, and some have gone so far as to define its characters and properties; but the very existence of a pus-globule, which would thus constitute the principal element of pus, is not even admitted by all who devote themselves to micrographic studies. The danger from absorption is much diminished when the pus absorbed, unlike that produced by the surface of a wound, has not been exposed to contact with atmospheric air. In fact, although it is an anomalous and morbid body, yet its elements have still preserved their primary properties; they are still animal particles, that may be returned without inconvenience into the system from which they had been separated. But in other cases, as we have said, they are new bodies that go to poison the system. In fact, soon after absorption, particular symptoms declare themselves, and render manifest their pernicious action on the organism, such as tremblings and those remarkable rigors of which we all know the import—the precursory signs of an adynamic fever that never fails to carry off the patient.

Independently of its general properties, we must also look at pus in a practical and surgical light. When the wound from which it issues is large and inclined, it finds a ready exit; the secreting surface gradually lessens, and there is good reason to look for a cure; but should the wound, on the contrary, be deep and anfractuons, and its situation such as to be unfavorable to the discharge of the secretions, the pus then lodges and corrupts at the bottom of the wound, and it is then you have reason to apprehend the accession of those symptoms of purulent infection we have mentioned. The anatomical disposition of the parts directs, as it were, the pus in its course, and the cellular tissue opens up the way. When lodged thus in the popliteal region, pus may descend into the leg, separating, as by dissection, muscle from muscle; or it may ascend in the thigh, separating in the same way the muscles, as far as the groin; below it finds a firm, dense tissue; above the tissue is loose and lamellated; and this last is the direction it takes, under the abdominal integuments. It follows the cellular sheaths of the vessels and nerves, and so transports itself from one point to another. Should its source be some part of the vertebral column, it may be seen dissecting the nervous plexuses, and the various aponeurotic layers, and collecting definitely at some part of the thoracic or abdom-

inal parietes or at the groin; or sometimes it insinuates itself into a muscle, follows its vessels or nerve, and transforms it into a veritable sponge filled with pus. Again, it may be inaccessibly confined, as in a capsule under strong and dense aponeuroses, when, taking advantage of some minute interstice, it opens out among the fibres a way for itself, which it enlarges by virtue of its corrosive qualities, and goes to invade a new region which you would have supposed secure from any attack. It is thus you see suppuration, confined at first, it may be, to the axilla or thoracic parietes, penetrate the thoracic, peritoneal or articular cavities, &c.

The different tissues attacked, or exposed by a wound, have almost always different degrees of tendency to cicatrize. The skin cicatrizes more readily than muscle, bone, tendon, &c. Hence some wounds close externally whilst deep-seated suppuration is in full activity. Hence wounds closed externally and apparently cured may all at once give issue to an unexpected flood of pus. This is often seen after extirpation of the breast; and there is at this moment an unhappy example of this in the ward for females. This variety of tissue, and this suppuration, which is but too often a result of treatment of wounds by the first intention, baffles the hopes that had been entertained of converting a vast wound into a shut cavity, where the bleeding surfaces, placed directly in contact, deprived of communication with the external air, would have but to adhere to each other, or where at least the suppuration, as in the naturally shut cavities, would not be exposed to these changes that contact with atmospheric air produces.—*Medical Circular, April 28th.*

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

[Reported for the MONTHLY by E. LEE JONES, M.D., Secretary.]

Regular meeting, January 13, 1858. Dr. J. R. Wood, President.

Dr. Alonzo Clark exhibited a portion of a membranous material that was withdrawn from the bladder of a woman shortly after parturition. The specimen was brought to him by Dr. Weeks. It is of interest in connection with one that was exhibited two or three meetings since by one of the members. The question then arose as to the character of this membrane. He supposes this to be an analogous membrane. In regard to this specimen, on one surface it is rough and irregular, and on the other, smooth and of a whitish color. On the rough surface there is no adventitious matter, while on the smooth

surface there is an abundance of the triple phosphate, apparently incorporated to a considerable extent in the tissue. The microscopical character of the smooth surface is granular and amorphous, while that of the rougher surface is fibrous, the fibres exactly corresponding in character to the fibres of the healthy bladder. The rougher surface looks very much as if this tissue was the result of the splitting of the tissues of the bladder. He could but think that this was the mucous surface—that the mucous membrane had been separated, and a portion of the areolar tissue, that binds the mucous membrane to the muscular, had been separated with it. The history of the case is substantially this: On the first of December this woman was found to be suffering from some pains about the pubic region, being then pregnant. He had forgotten at what period, but at all events it was at such time that the discharge was regarded as an abortion. Very soon after this the waters came away, and for several days subsequently (8 or 9 he thought) she suffered from annoying and teasing pains. Finally the foetus was discharged, and after this she continued to have considerable pain in urination, and was soon unable to pass her urine at all. Dr. Weeks was obliged to use the catheter; he would sometimes draw away something like a pint at a time. Shortly after he found it would fairly enter the bladder, would move in a certain space, and no urine would flow; and in two or three instances, in pushing the instrument on and moving it about, it passed through something. On this membrane will be found two holes; in another portion of the membrane, in the possession of Dr. W., there are two more holes. After a certain length of time, this difficulty of urination, pain, &c., continuing, she passed, for the most part, urine, a specimen of which is here presented, kept two or three weeks. The sedimentary matter is entirely pus and blood corpuscles that have lost their color. The deep color of the supernatant fluid is made by the coloring matter of the blood. This was the kind she passed continually. At length the nurse observed that something was wrong. The doctor came and found the urethra filled with an animal-looking tissue. He took hold of it with the forceps and gradually drew it down until he could get hold of it with his thumb and fingers, when he slowly withdrew it, giving the woman great pain from the distension of the urethra. From this time she was able to pass her water without a catheter, and for a considerable time its passage was not very frequent. The appearance of the urine changed after a little while from this deep muddy-looking fluid to something nearer its natural color. This urine was passed some two or three weeks after the membrane was withdrawn. It was

procured for him for the particular purpose that he should ascertain if there were any cells in the sedimentary matter that would indicate separation in the tissues of the bladder. He saw none. The woman has gone on very well—her pains have decreased, but she can contain only a little urine in her bladder, and urinates about every two hours. At first she got along very well, but now the bladder seems to be unwilling to contain any considerable quantity. What its state is, is not known. He believes that the examination of this specimen will pretty decidedly lead to the conviction that it is some of the natural tissues of the bladder, or some other viscus, (it could hardly be anything besides the bladder,) and not an adventitious or false membrane, in this respect confirming the impressions of the gentleman who presented a similar specimen some time since.

Dr. J. R. Wood observed that *Dr. Krakowitzer* presented a case very much like this a short time since, and a committee was appointed to investigate its character. The committee consisted of *Drs. Dalton, Gouley and Sands*.

Dr. Draper was present at the examination, and stated that the appearances were exactly those which *Dr. Clark* described. The smooth surface was covered with white deposit of the phosphates, considerable granular matter; the rough surface had a coarse areolar structure. It was, however, so much changed at the time of its examination, no positive opinion could be arrived at as to its nature. No epithelial cells could be discovered. It was *Dr. Gouley's* opinion that it was a false membrane, and not the mucous membrane of the bladder.

Dr. Peaslee.—Was there any trace of vascularity in either of these specimens?

Dr. Clark.—It will be recollected how difficult it is to find vascularity where there was no blood in the tissues. As these were separated from the bladder, and had been macerating in the urine for some time before they were discharged, they would hardly be likely to contain any blood; therefore it would be impossible to distinguish vessels from other organized tissues.

Dr. Peaslee knew it was difficult to make out vascularity in such cases, but still, if that were possible, it would demonstrate clearly that this was part of the tissue of the bladder. His impression was, that the membrane thus extruded could be none other than a part of the original tissue of the bladder. He did not know why sloughing of the membrane of the bladder could not as well take place as sloughing of the skin; the subsequent symptoms which have occurred are those

which should have been expected to have taken place. When the other specimen was introduced here, he suggested that probably it was a false membrane; that it did not come from the bladder, but from the vagina. He asserted this on general principles, because he could not see how false membranes could be found, under any ordinary circumstances, in the bladder, unless there was total suppression of urine. He could conceive how it can form here, when it is in a state of rest, as well as in any other tissue of the body.

Dr. Markoe exhibited a specimen of *hip-joint disease*.

Dr. Finnell exhibited the *cerebellum and dura mater* taken from a German, 54 years of age. He had been disputing with some neighbors about some trivial affair, and got in a great passion—during which excitement one of the neighbors struck him a slight blow on the head with the handle of a small axe. Very little was thought of the injury, and he retired to his room; soon after, however, he complained of lancinating pain in the head. He directed his son to obtain him a cooling application for his head, but before the son returned with the water he was dead.

Autopsy.—There is seen a rupture of the left lobe of the cerebellum, and a large quantity of coagulated blood in the substance of the hemisphere; this had passed out through the lacerated portion of the cerebellum, and lodged in the base of the brain. No other lesion was discovered. The question arose, whether this blood was the result of the injury, or of apoplexy. He would ask the members if any of them had seen apoplectic effusion in this situation, and if so, if this is such a case. In removing the *dura mater*, he found a large concretion branching down from the *falx*, about the size of a bean. It is a sharp spicula of bone. There is no surrounding inflammation.

Dr. Dalton doubted the existence of laceration, and stated that it could not be determined in the present condition of the specimen, but would like to ask *Dr. F.* whether the appearances, in its recent state, were those of laceration. I see (said he) what appears to be a laceration, which seems to be really nothing more than a convolution—an apoplectic clot, forcing itself in between; the convulsions would certainly be very apt to produce this condition. It seems very difficult to understand how the cerebellum could be thus lacerated by a blow.

Dr. Finnell thought there was no doubt of a laceration of the brain substance—that when he raised the cerebellum, he saw blood in the base of the brain.

Dr. F. also exhibited the *Cervical Vertebrae—Carotid Arteries in situ—together with Larynx*, taken from a man who committed suicide

by stabbing himself with a knife. He was a very intemperate man, and was laboring under delirium tremens. He went to bed as usual, at night, with his wife; he arose during the night, went to his bench, (he being a shoemaker,) seized a knife, plunged it into his neck, and returned to bed. In the morning his wife found him dead by her side. There was a large quantity of blood around the bed. The knife is seen sticking firmly in the body of the fifth cervical vertebra; the opening will be seen on the right of the larynx, passing just below the os hyoides, escaping the carotid arteries as they lie in place. He stated that this case was interesting in connection with the testimony given at the trial of Donnelly for the murder of Moses—whether such a wound, as found on the body of Moses, could have been suicidal. The question was discussed before the Society. Most of the gentlemen were satisfied that the wound could not be suicidal, on account of its severity, position, &c.; but here is a wound precisely like the one inflicted upon Moses. Had he seen this specimen before, he could have sworn positively whether it could have been suicidal or not. The wound was in precisely the same place, and death arose from the same cause, bleeding from deep thyroid artery.

Regular meeting, January 27, 1858. Dr. Peaslee, President.

Dr. Isaacs read the details of a case of *fracture* of the *skull*, presenting many points of interest. The patient was brought before the Society. The case occurred in the practice of Dr. George Cochran, of Brooklyn.

Dr. Enos showed a *vesical calculus* removed from a boy 11 years of age, who had suffered from symptoms of stone for the last eight years. When he entered the Brooklyn Hospital, two months since, his pulse was 164. The water was very copious in quantity, of very low sp. gr. It abounded in crystals of the triple phosphates. It was impossible to introduce anything into the urethra unless chloroform was administered, so great was the irritability of the parts. He readily detected the stone both by sound and examination per rectum; it was judged to be pretty large. On account of size of the stone the bilateral section was resorted to, and the instrument invented by Dr. A. Post for that purpose was used. There was considerable difficulty in extracting it. In about twenty-four hours after the operation he passed his water entirely by the urethra, which, however, only continued till the next day; it was then passed through the wound for nearly two weeks; then the bladder would retain the water for an hour or two—part would go through the perineum and part through the urethra. About the time that he began to retain his water there were symptoms of

inflammatory trouble about the bladder; the bowels became distended, somewhat tympanitic; there was tenderness on percussion, the pain referable to the umbilicus. The pain over the bladder was very acute indeed. The pulse, which had been down since the operation to 100, now rose to 140. The only marked difference between these symptoms and those of inflammation was the fact that steady pressure could be tolerated over the abdomen. These symptoms gradually subsided, until now he is nearly well. The central portion of the stone is almost entirely made up of uric acid, the outer portions are somewhat phosphatic. Weight 1 ounce and 3 grains. It measured in largest circumference $4\frac{1}{2}$ inches.

Dr. James Wood presented a specimen of *impacted fracture of neck of femur*, in which there was perfect union with the loss of the neck.

The subject from whom it was taken was 57 years of age at the time of the accident, May 20th, 1857, and although not very robust, still enjoyed very good health. He was not strictly temperate, neither could he be considered intemperate, judging from the history he gave me of his habits. When a young man he contracted a chancre, which was treated as soon as it was noticed, and not followed by any discoverable constitutional symptoms that I could ascertain.

He came under my charge May 23d, nearly three days after the accident, of which he gave the following account. While descending a stairway he slipped a few feet and fell, striking the postero-lateral portion of his left trochanter major against the projecting edge of one of the steps. On recovering himself, he found that he could not move his left lower extremity, but supposing that he had suffered no serious injury at the time, he did not seek surgical advice, as he thought that he would recover in a few days and be able to resume his trade, which was shoemaking. Finding, however, that he grew no better, he came under my charge, presenting the following symptoms, viz.: Shortening of the left lower extremity a little over one inch; eversion of the foot; inability to elevate or rotate the limb inwards; and very well marked osseous crepitus when extension and rotation were made. He was examined by a number of medical gentlemen, who were all of the opinion that a fracture of the neck of the bone existed, but differed from me in not expressing any opinion as to its seat. Taking into consideration the age of the patient, and the small segment of a circle described by the trochanter major, when extension and rotation were made, I supposed it to be a fracture of the neck within the capsule.

The only treatment adopted for the first three days was to place the limb in as easy a position as possible. On the 26th of May, a

long strip of adhesive plaster was applied along the inner and outer aspects of the leg and thigh, forming a loop a couple of inches long below the foot. The limb was then snugly bandaged and secured to a splint that extended from a body belt to a point eight or ten inches beyond the foot. Extension was then made by connecting the screw in the lower end of the splint to the loop of adhesive plaster, and counter extension made with a perineal pad that was attached to the upper end of the same splint. The extension was increased from day to day, keeping the limb nearly its natural length, until the end of the fourth day, when the perineal pad, although soft, had chafed him so much that it had to be removed. He was then placed in an apparatus invented by Dr. Burge, with which counter extension is made over the tuberosities of the ischia, and extension by means of the screw at the lower part of the long splint. In this apparatus his pelvis was held secure and at rest, being confined between the splint on one side and a movable support on the other.

On June 24th it was found necessary to re-dress the limb, as the bandage had loosened over the leg, and the plaster began to slip. At this time there was half an inch of shortening by measurement. He bore the treatment very well. No change was made from this time until July 19th, when the apparatus was dispensed with. The limb still continued half an inch shorter than the uninjured one, and, judging from the examination made at the time, union was supposed to have taken place. Having complained of considerable pain in the joint when moved or left unsupported by a pad behind the trochanter major, a blister was applied, with the supposition that some inflammation existed within the capsule. This was followed by relief for some days, after which time it was considered proper to repeat it, and so on at intervals for some weeks, at the end of which time he could forcibly push himself up in bed, by placing the foot of the injured limb against the foot rail of the bedstead.

He never recovered, however, so as to be able to walk about, although he would stand on the limb whenever he was desired to do so.

On the 19th of August he was attacked with acute bronchitis, which soon yielded to treatment. As some cough and expectoration continued, a thorough examination of his chest was made, and it was found that tubercles were softening in the anterior portion of both lungs.

With but few exceptions he was confined to his bed until the time of his death, January 23d, 1858.

Post-mortem 23 hours after death. Lungs found extensively diseased.

The accompanying specimen was then removed, and macerated in alcohol and water. As I desired to examine it a little, I divided the capsule close around the border of the acetabulum, and cut through the ligamentum teres. I made a horizontal section through the head, neck, and trochanter, thinking that a clearer view could be obtained than if it was made vertical.

Dr. Markoe presented a specimen of *fibrous cellular tumor* from the *anterior* wall of *vagina*. The tumor was taken from a patient 40 years old, a widow, of excellent general health, though bearing some scars in the neck of scrofulous disease of the glands. She had perceived it as a distinct tumor about nine years, but from the time of her marriage, at the age of 17, she thought there was something wrong about the orifice of her vagina, because penetration was impossible, and never was fully accomplished until she had been married seven years; and in the mean time the constant attempts at connection gave her a vast deal of pain. At this time conception took place, and she bore a living child, without any unusual difficulty, and for some time after its birth connection was more easy, but the impediment gradually returned, and has always since existed. The tumor from its commencement has been painless, and only during the last few years has it become inconvenient by its position, not only by its protruding constantly from between the labia, but by its pressure backwards, occluding the mouth of the vagina, and causing a retention of the menstrual discharges. The tumor before removal appeared to be about the size of a small hen's egg, and at first sight appeared to protrude from the orifice of the vagina. The urethral orifice, however, was seen on its upper surface, drawn out by the protrusion of the tumor, and the opening of the vagina was behind and before it. The finger passed into the vagina, recognizing the tumor as pressing down the anterior wall of the passage, and reaching up some distance along the urethro-vaginal septum; a catheter passed into the urethra could be felt by the finger in the vagina, just before its entrance into the bladder. It appeared clear, therefore, that the tumor occupied the space between the mucous membrane of the urethra above, and of the vagina below, and the history seemed to show that at its first appearance it projected backwards, so as to occlude the vagina, and that as it gradually grew larger it escaped from the vagina, and enlarged externally. Its surface was covered by healthy mucous membrane, not adherent to the tumor, and by great care and cleanliness it had been kept from excoriation, till a few days before the operation. The removal was effected without difficulty, by an oval incision beginning about one-third of an

inch below the orifice of the urethra, and coming to a point near the posterior part of the tumor. By carefully carrying the incision down to the substance of the tumor, it was enucleated easily with the finger and the handle of the scalpel. Before the operation it was difficult to decide whether the tumor, which was firm and elastic, fluctuated or not. This doubt ceased the moment it was released from its coverings. Its elasticity ceased, and it became flabby, resembling in all external respects a rather soft, fatty tumor. It was covered by a perfect, but delicate capsule. On section it presented a homogeneous surface, of a light pinkish color, faintly intersected with lighter colored bands and fibres. Under the microscope it presented the appearance of fibres banded together in parallel lines, and somewhat interlacing with each other. There were a good many nucleus-looking bodies scattered about, but I could not decide whether they belonged to the fibres, or were accidentally placed among them. The appearances to the naked eye, and the history and position of the tumor, corresponded very nearly with Paget's fibro-cellular tumor, and the microscopical appearances were sufficiently similar to induce me to regard it as belonging to that class.

EDITORIAL AND MISCELLANEOUS.

The four last meetings of the Academy of Medicine have been of a decidedly scientific character—a great improvement as compared with some former meetings, when the time has been frittered away in trivialities, which are neither edifying nor profitable. In all such societies there are some who are constantly seeking for notoriety, whose audacity is boundless, but whose only opportunity for making themselves conspicuous occurs in connection with some question as regards the mechanism of organization. They are strong on motions and amendments, and quasi ethical questions, especially if there is a chance for the indulgence of mean insinuation or the gratification of any petty malice; but they are only “dumb dogs” when scientific questions come up.

At the regular meeting, after the transaction of the ordinary business, Prof. Dalton read the interesting and elaborate paper on the structure of the placenta, which will be found in the first part of this number of the MONTHLY. At the conclusion of this paper, which was

received with much applause, the President called upon Dr. Barker to make some remarks.

Dr. Barker said he had been an interested listener to the valuable paper, which had given so clear a description of the present received doctrines as to the structure of the placenta. In the main, they were the same that he had been accustomed to teach for seven or eight years past.

He believed that it was now established beyond a doubt that the decidua is only the hypertrophied mucous membrane and its follicles, and not a new membranous exudation, and that the placenta is developed by the intermingling or interlacing of the vascular apparatus of the decidua with the villousities of the chorion; and that while there is no communication between the maternal and the foetal vessels, the placenta is really made up of two distinct parts, the uterine or maternal vessels and the umbilical or foetal vessels. He (*Dr. B.*) was especially interested in the new mode of demonstrating, by means of the blow-pipe, the direct communication of the uterine vessels with the placental sinuses. These experiments were entirely new to him, and he thought that they had an important practical bearing. It is well known that in certain cases of placenta previa, when the hæmorrhage is so severe as to jeopardize the life of the mother, Prof. Simpson has proposed to separate the entire placenta for the purpose of arresting the hæmorrhage. Clinical experience has shown that this entire detachment is followed by a complete cessation of the hæmorrhage. Dr. Trask, of White Plains, in his prize essay on placenta previa, a paper which has received and justly deserves the highest encomiums, has conclusively established this by his statistics. This proposition of Prof. Simpson has been violently opposed by many eminent obstetricians, and the question as to the *source* of the hæmorrhage in placenta previa has been much controverted. Some have believed that where the hæmorrhage occurs in consequence of partial separation of the placenta from the place of its insertion in the uterus, the blood flows from the orifices of the exposed uterine vessels. Others have believed that it passes from the maternal vessels into the placenta by that portion of its surface which remained attached, and escapes out of the placenta by that portion of its surface which has become detached. Now, these experiments of Dr. Dalton show that the blood flows from both of these sources, from the denuded surface of the partially detached placenta, and also from the exposed uterine veins. We have also an anatomical basis for estimating the value of the new plan of treatment for placenta previa, proposed by Dr. Barnes, of London. Without stopping

now to discuss the arguments by which Dr. Barnes sustains his views, he would only mention the clinical fact, that in one case only had he had the opportunity of testing his plan, and in this case he was not successful in arresting the hæmorrhage. Much remains yet to be learned in regard to the physiology and pathology of the placenta, and he hoped the author of the interesting paper that we had heard this evening would continue his investigations. He would like to inquire of Dr. Dalton whether he had found fatty degeneration of the placenta a frequent occurrence. A few years since much was said of this pathological change as a cause of premature labor.

Dr. Dalton replied that he had not directed his attention to this subject.

Dr. Taylor made some remarks, the purport of which we could not gather.

Dr. Geo. A. Elliot, in reply to Dr. Barker's question, remarked that when Dr. Barnes' paper appeared he was Resident Physician in the Lying-in Asylum, and engaged with Dr. Van Arsdale in making some researches on the urine of pregnancy, and that with the assistance of that distinguished microscopist he had examined a number of placenta during a period of some four months, without finding the evidences of the fatty degeneration alluded to by Dr. Barnes.

Dr. Alonzo Clark said that he had made microscopic examinations of the placenta, and had found distinct evidences of fatty degeneration.

The Journal of Dr. Simple, Practitioner of Medicine, Paris.

(CONTINUED.)

January 16. Madam Laguerre, a very amiable and well-known nurse, called to present her compliments and to ask me to recommend her to my patients. She has a good figure, and I am not surprised that M. Roux, whose death she still mourns, patronized her largely. I shall employ her notwithstanding Benoit's proverb, "Whoever has a nurse has a viper."

January 17. I occupy the second story of the house where I live. What was my surprise this morning on going down stairs to see the word DOCTOR shining on a copper plate on the door leading to the first story. I was even informed by the *concierge* that the first story was hired by a confrère. This is not pleasant. Benoit coming in says, that not having any clause in my lease making a stipulation in this respect, the landlord has the right to do so. Still there is sure to be confusion, and this will be to my disadvantage. Benoit consoles me by saying that my position is more *elevated* than that of my confrère.

January 18. The disagreeable effects of this arrangement begin to be felt. Three or four persons have rung at the lower door, thinking they rung for me. Have I not the right to put a sign on the most prominent part of the entrance, indicating that Dr. Simple lives in the second story?

January 20. Madam Laguerre, whom I have put in charge of a young typhoid patient, pleases me. My neighbor, below me, is a homœopath. Benoit would persuade me that the danger is no greater. He says there is only one way of exorcising him, and that is by bringing the *concierge* into my interest. I reject this method indignantly.

January 21. Benoit, who has no scruples, and wishes to mix himself up in my affairs in spite of me, went and offered 50 francs to the *concierge* to attend to my interest. He replied that the physician in the first story was more generous, and had offered him 100 francs. There, that's well done! Am I sufficiently humiliated?

January 23. Will Benoit's proverb prove true? Madam Laguerre has constantly made mistakes and blunders. I ordered twenty leeches to the mastoid processes, and she put on only a dozen, applying them to the anus, with the excuse that in young girls it is necessary to avoid making scars behind the ears. I prescribed milk mixed with barley water; she gave only the barley water, pretending that the milk was too nourishing, but the milk disappeared. I advised the use of Peruvian bark, Malaga wine and cocoa, four teaspoonfuls a day. The half-pint bottle was dry in twenty-four hours. They gave her two hearty meals a day, with two bottles of wine, coffee in the morning, and a substantial lunch at night, and she complains that she is dying of hunger, and that I had sent her to a hovel. Has she not scolded about the seidlitz water, pretending that castor oil is borne better? Has she not dared to say that the great physicians do not treat typhoid fever in this way? Fortunately I am well anchored in this family.

January 24. Madam Laguerre has excited distrust; they ask for a consultation for the girl with typhoid fever, though her disease is mild. They propose Dr. X. This is Madam Laguerre's choice. What more can Dr. X. do for a simple disease which approaches a happy termination?

January 25. Dr. X. behaved very well. He greatly approved of my diagnosis, prognosis and treatment. However, he has substituted chicken broth for the porridge, magnesian lemonade for the seidlitz water, injections with oil instead of flax seed, and appears to attach great importance to these unimportant changes. Madam Laguerre appears triumphant. This woman decidedly displeases me.

January 26. Six months since I had the misfortune to lose a patient who resided in the *Rue d'Astorg*. The widow, who inherited a handsome fortune from her husband, not having yet paid me, I thought that after six months I might be permitted to remind her of my care of her husband, and I wrote her a very polite note. In the course of the day I received the following billet:

"Madam Widow X., to whom you so cruelly and so soon recall a

painful loss, finds it impossible to attend to your account, of which you have besides given her no items. Be good enough to make a note of it, and send it to her on her return from the journey she is just about to make to Italy."

Billet without signature, initial paper, open work, perfumed, and with a large black border.

Benoit, who knows everything and sees everything, says that this widow, whose sorrow prevents her from paying her husband's physician, has repaired her charming little house in the *Rue d'Astorg*, from top to bottom. It is, probably, for the purpose of removing every recollection of her loss.

Jan. 27. My little typhus patient gets on better and better. Certainly, said her mother to me this morning, since Dr. X.'s treatment was adopted the disease has changed its character. But, madam, I replied, there was no more danger before the consultation than there is now. Oh, I saw the sign Dr. X. made when he felt of the bowels. What sign did he make? The abdomen has remained soft, the gurgling was scarcely perceptible, there was almost no diarrhœa, but few spots on the skin, and little disturbance of the mind. This, said madam Laguerre, did not prevent Dr. X. saying that it was necessary to do something more energetic. But the means which he advised were identical with those which I had myself used.

It was of no use. I saw that the family was prejudiced, and that all the honor of the cure would be given to Dr. X.

Benoit on this occasion expounded to me a long theory on consultation. "It is necessary," said he, "to listen with great attention to all that is said, and to let nothing pass which can raise a doubt in the minds of the family." It is necessary—it is necessary for so many things that my poor head can never remember them.

January 28th. There are some compensations for professional trials. Some months since, I attended for a grave acute disease a young woman, to tell the truth, a beautiful sinner of the *Rue St. Lazare*. Although I did not expect anything from this patient, living so improvidently; passing before her door one morning, I went up to see her. She was in a bath perfumed enough to make one dizzy.

"Ah, is that you, good Doctor?" she cried; "I have not forgotten you, be sure of that. I owe you much money, do I not? I will pay you, don't be uneasy. What do you think? this frightful disease from which you saved me, had so changed me, I was so thin, so pale—you understand, Doctor."

"But, my child, I did not come to dun you; passing before your door, I wished to see if your health continued, that was all."

"I get on charmingly, my good Dr. Simple. You are very kind to make me this little visit. There, let us make everything pleasant—breakfast with me."

"Thank you, thank you, my child, I never breakfast; and I leave you, delighted to find you are so well."

"Yes! have I not changed very much?"

"You are more charming than ever. Adieu! adieu!"

"I shall not forget you, Dr. Simple, and perhaps you will have news of me sooner than you think."

I was in my private room, when about three o'clock Frances admitted a handsome, elegant, and, upon my word, a very charming young man.

"Have I the honor to address Dr. Simple?"

"Yes, sir!"

"You attended Mademoiselle Camille, Rue St. Lazare?"

"Yes, sir!"

"I am permitted by her to have the honor of thanking you, sir, for the excellent care which you have given her."

The handsome young man rose, and placed a small roll upon my mantel-piece, and departed.

This little roll contained ten golden Napoleons. I should not have had such windfalls at Tartas.

Half an hour later, Frances introduced a gentleman of a more mature age, decorated with several many-colored ribbons, perfectly dressed, who said, with a slightly foreign accent, "is this Dr. Simple to whom I have the honor to speak?"

"Yes, sir!"

"You attended Mademoiselle Camille, Rue St. Lazare?"

"Yes, sir!"

"Mademoiselle Camille charged me to offer you her thanks—"

"But, sir—"

"She has one regret—which is, that she cannot show herself more grateful," and the gentleman, rising, laid a roll upon the mantel-piece. I was astonished; if I speak, said I to myself, I shall disclose—but yet, I cannot keep—

While I made these reflections, the decorated gentleman had already gone. The roll contained fifteen Napoleons. There was no time for hesitation—I took my hat and went to Camille's house with the two rolls. She saw me at a distance, and cried out,

"Has he done it well, dear Doctor?"

"But *they* have done it too well—"

"What! did they both go there?"

"Both!"

"Ah! that is charming, that is charming;" and this giddy girl burst into laughter.

"I will tell you all about it," said she; "they are two real gentlemen, are they not, Doctor? I told both of them that I could not admit them to my society till they had paid for me a debt of affection. I told them of you, and of your kind care, and see—"

"All that does not concern me; here are two rolls which I have received, take whichever you will—"

"Fie, Doctor, for what do you take me? It is not too much for all you have done for me. Besides, there is a way of reconciling the whole; keep the first roll for the past, and the second for the future. I shall not always have so good an opportunity."

It is all the same; one of the rolls weighs upon me, and I will send it to the Association of Physicians of the Seine.

January 29th. My neighbor, the pharmacist, who wishes to be friends again with me, has sent me six bottles of Malaga wine, with which he says he prepares his laudanum. After all, perhaps he is not a bad man.

January 30th. I received an invitation to dine with the Surgeon X., who treated my patient in the Rue Duphot. Benoit had an attack of ill humor on reading the invitation. "What," said he, "this surgeon has taken away your patient, and he thinks to pay you by inviting you to dinner; refuse properly, without compliments."

I wrote at his dictation, "Doctor Simple cannot accept the invitation of Doctor X."

I think this note very dry.

"One of two things," replied Benoit, "this confrere fears you or esteems you. If he fears you, he will perceive that you appreciate his indelicate act, he will fear you more, and will not repeat it on your account; if he esteems you, he will esteem you more for refusing his dinner."

On this subject of dinners Benoit has made a most vehement tirade. He must write it out for me, that I may enter it in my journal.

January 31. I was called to an old lady in this quarter of the city. She is not exactly sick, but she desired to make provision for a physician in case of accident, and wished to know him beforehand.

"How much do you charge a visit," she said to me.

Considering the appearance of ease in the apartment, I thought I was very modest in saying three francs.

"Three francs!" replied the old lady; "but Professor Z. never charged me but two francs. He now lives so far off that I wish to have another physician, but at the same price."

And it is so. How can Prof. Z., so very well known, so sought for, come here, and at so low a price poach upon the lands of the poor practitioners of the quarter? Benoit thinks it is very mean.

Benoit has produced a great excitement in my mind. He wishes me to marry. I have listened to Frances' remonstrances all day, who thinks that I shall never be as happy as I am now. Perhaps she is right. I do not know what I have done all day. Benoit wishes to present me to-morrow.

February 1. In the possibility of my marrying I set about collecting my dues. I have written to-day to one of my patrons, whose wife and three children I have taken care of for three years, and of whom I have never asked any fee. So polite are they to me, I am invited to dine at least once a month, and there is no family fete at which I am not a guest.

February 2. I have to-day received the following answer to my demand:

"Doctor—It is with great surprise that I have received your bill, amounting to 140 francs, for twenty-eight visits made to my wife and children during the last three years. You have forgotten, and you

compel me to remind you, that during those three years you have taken dinners at my house which amount to a larger sum than that which you demand of me. These are the items:

30	Dinners, at 3 francs each.....	90	francs.
3	Extra dinners on my wife's birth day, at 6 frs..	18	"
3	" " own " " ..	18	"
1	" " my daughter's first communion	6	"
3	" " the distribution of prizes to my children, at 6 frs.....	18	"

Total.....150 francs.

You owe me, therefore, 10 francs, which I beg you to send to me, for my family will not continue to employ a physician who is so forgetful.

I have the honor to be, &c.

X., Button Maker."

Benoit almost split with laughter at this letter, which did not seem to me to be very laughable.

"Did you go to dine there without being invited?"

"Never; and on the contrary every time I went to dine I had to give advice to all the family, and even to the domestics."

"And have you reckoned these consultations in your bill?"

"Not at all, I have counted them visits only which I made on days when I did not dine there."

"Then he must be sued, and I will attend to it."

February 3. I related this experience to my future father-in-law, a linen merchant in the *Rue St. Fiacre*. Benoit says I did wrong, and that the father-in-law asked him in a very cold way if such mishaps often came to me. He added, that a physician's income did not appear to him to be very certain. He asked questions upon questions, which embarrassed Benoit even.

February 4. I received to-day a very singular visit and a still more singular proposition.

A man rather gentlemanly in his appearance, though his language was somewhat common, attracted, he said, by my reputation as a practitioner and as an honest man, made this statement to me:

A learned naturalist, sent on a mission to South America, had discovered in his travels a marvelous remedy for the cure of the gravest and most desperate diseases of the lungs. He quoted cures by hundreds, and in Paris even some wonderful cures had just been performed. He kept the remedy a secret; but as he was not a physician, could not use it; that is to say—profitably. He desired to find a physician who would allow him to make him rich. A company of capitalists had been formed; a superb apartment was already rented in one of the finest quarters of Paris. Rich furniture decorated it. They were willing to spend from 30 to 50,000 francs a year in advertising, if it was necessary. They would offer to an honest physician who was sufficiently known, this elegant lodging, domestics in proportion, a carriage, and a quarter part of the receipts, which they supposed would exceed 150,000 francs a year.

It was this position and this profit which the gentleman came to offer to me.

The blood rushed to my forehead during the discourse of my impudent visitor.

"And you think," said I to him, "that an honest man can accept such a proposition?"

"Why not? There are in this place, Paris, affairs of this kind which are very profitable. Do you wish me to mention some of them?"

"The *philanthropico-humanitarian pharmacy*, where the advice of the physician is given gratis, but where the remedy is sold at a very high price—a partnership.

"That *female physician* who takes up so much room on the fourth page of the papers—a partnership.

"That *office for consultation* in the name of a physician who has been dead these twelve years, the placards of which are found posted even on the pyramids of Egypt—a partnership.

"That ———"

"Hold, sir! will you be so kind as to go and say to those who sent you that they have done me the greatest injury by daring to think me capable of accepting your proposition?"

This time I received the unreserved congratulations of Benoit, who advised me, however, not to say anything of the affair to the future father-in-law.

"Linen drapers do not understand these professional delicacies. He would only see one thing, namely, that you had refused 25 or 30,000 francs."

February 5. I begin to be known to and appreciated by the authorities of my quarter. My commissary of police wrote to me this evening, to invite me to go to-morrow morning to make the post-mortem examination of a person accidentally killed in a neighboring street. I am flattered by this preference.

February 6. What a horrible sight—what terrible labor! It was a poor devil, who had been dead at least three weeks, and the body was in a condition of complete putrefaction. I passed three hours in this poisoned atmosphere. It required more than an hour to draw up my report. I shall be allowed six francs for it.

February 7. The commissary of police thanked me for my report. He wished me to go to see a person in Amsterdam Street, who had been knocked down by a carriage and had entered a complaint. The individual had only a slight scratch on the leg, and I made my report accordingly.

February 8. The wife of that man came to my house to-day to abuse me. She told me that no doubt I was a stockholder in the carriage company, and did not wish they should obtain damages from the corporation.

February 9. One of my patients in Rumford Street had an attack of apoplexy last night. They ran for the nearest physician, and then sent for me. I was urged to go and see the patient. I had scarcely

entered the room when my *confrere* of the night presented himself. I think he should have waited till I sent for him. He wished to consult with me. He asked at what hours I would see the patient; in short, he intends to join me in the treatment.

This *confrere* embarrasses me. The family is not very well off; one physician is enough—why should he impose two upon them?

Fortunately, the husband of the woman came to see me, and asked if the situation of his wife was such as to need the assistance of counsel. I told him it was not. Treat my *confrere* properly, said I; thank him for his skillful care, and send him 20 francs for his night visit and 10 francs for the call this morning. It appears to me that, considering the circumstances of my patient, I have acted according to professional etiquette.

February 10. My *confrere* of the night is not satisfied. He wrote me an angry and offensive letter. I shall not answer it. Benoit, whom I have consulted, says that I have done as I ought. How suddenly an enemy has been added to my list!

February 12th. One of my friends from Tartas came to pass the festival days in Paris. Upon arriving he was attacked by the influenza, and sent to find me. That was not very easy, as he told me. In the hotel where he was, no one was willing to go on the errand. He is not the physician of the hotel, they replied, and accompanied their answer with great praises of Dr. X., with whom all travellers were very well satisfied.

Benoit tells me that, in fact, every large hotel not only has its physicians, its surgeons, and its druggists, but also a sort of medical brokers, on the watch for sick travellers coming to Paris for advice.

On this occasion he told me of a distinguished Russian lady, who came to Paris for advice concerning a tumor of the breast, and took rooms at the ——— Hotel. On the first day this lady found on her table the visiting card of a surgeon. The next day there was the account, published in a medical journal, of a brilliant and successful operation performed by this surgeon. On the next day an invisible hand had placed in the lady's apartment a book published by this surgeon. A day later a more direct step was made. A woman came to her under pretence of selling her some laces, and in the conversation alluded to a tumor of the breast which she had had removed lately by the same surgeon. This management succeeded so well, that this Russian lady, who came to Paris to consult Messrs. Jobert and Velpeau, was well and duly operated upon by Surgeon X., of whom she had never heard a word said.

Total, 6,000 francs, (1,000 of which go to the invisible hand,) and a foreign decoration.

— Medical science has recently met with many losses in the death of several of her brightest ornaments. We chronicle those whose names are familiarly known to both continents.

Dr. Robert Hare, formerly Professor of Chemistry in the University of Pennsylvania, died in Philadelphia, May 15. He was born,

it is said, in 1781, and was consequently seventy-seven years old when he died. Dr. Hare was well known throughout the scientific world as a natural philosopher of great eminence. His inventive powers were of the highest order; the reputation which he gained at an early age, and which was increased by after inventions, was owing in a great measure to the exercise of his inventive genius in the appliances of the Chemical Laboratory. In 1801, he entered the Chemical class in the University of Pennsylvania, and soon after he developed the oxyhydrogen blow-pipe, the invention of which was disputed by another experimenter in Great Britain, but is now unanimously conceded to him. Among other instruments which were invented by him during his long career as an experimental chemist, may be mentioned his modification of the common blow-pipe, and several important additions to the mechanics of galvanism. Among the latter are the calorimeter and deflagrator. In 1818, Dr. Hare was elected to the Chair of Chemistry in the University of Pennsylvania, to fill the vacancy occasioned by the transfer of the late Dr. John Rodman Coxe to the Chair of *Materia Medica*. This position Dr. Hare occupied till 1847, when he resigned, and was elected Emeritus Professor of Chemistry, in the same Institution.

Dr. Hare was a brilliant experimenter, but not an agreeable lecturer upon his favorite science. Although he was the author of many articles which appeared in our scientific journals, he has left no work of magnitude behind him.

During the few last years of his life his mind wandered from the pursuits of legitimate science, and was much occupied by the hallucinations of Spiritualism.

— M. Chomel died at Paris, on Friday, the 9th of April last. His disease was protracted and painful, and for the last year has impelled him to withdraw from active professional life. An immense crowd of the physicians of Paris thronged the Church of St. Thomas Aquinas, where the obsequies were performed. Professors of the Faculty, many of them in their professorial robes, members of the Academy of Medicine in official costume, physicians, students, friends from all classes of society, were present to pay to him the last respectful homage. Several orations were delivered at his tomb in the name of the Faculty, the Academy of Medicine, and of the physicians of the Hospital.

M. Chomel was born at Paris, in 1788, being of course seventy years old at the time of his death. He was of a family distinguished in medicine for two generations, and proved himself to be worthy of

his name. At the age of 23 he was *interne* of the hospital, and laureat of the Faculty. At 25, he received the degree of Doctor of Medicine, and his thesis, entitled an "Essay on Rheumatism," which still remains an authority, gives indications of mental abilities. While still young he was attached to the medical service of the Hospital, and commenced a course of lectures on internal pathology, and enriched medical literature by several papers, by a work on Fevers, and by his Treatise on General Pathology. The last has now reached its *fourth* edition in French, and has been translated into all languages of Europe. In 1823, at the age of 35, Chomel was elected one of the twenty-four associates, whose appointment had then been authorized. Three years later he was elected by the Faculty to the Chair of Clinical Medicine, which was made famous by Laënnec, and had become vacant by his death. At the Hotel Dieu he divided public favor with Dupuytren, who had previously reigned alone. He thus maintained his position at the summit of renown till his death; and now throughout the world his loss will be felt and will be mourned.

— Prof. William Gregory, of the University of Edinburg, died April 24, in the fifty-fourth year of his age. He was descended from a family distinguished in the annals of science of his native city for more than two hundred years. His father was the celebrated Dr. James Gregory, Professor of Practice of Medicine in the same University. Dr. William Gregory occupied the Chair of Chemistry, and was more remarkable for his writings than for any brilliant discoveries.

— Professor Müller, of Berlin, the distinguished physiologist, died lately, in the fifty-sixth year of his age.

— Professor Robert Harrison, of the University of Dublin, died on the 23d of April, of apoplexy. His work on Anatomy, called the "Dublin Dissector," is universally known where the English language is spoken, and has ever been a favorite work with anatomical students.

— Dr. E. Geddings, Professor of Surgery in the Medical College of the State of South Carolina, has resigned his chair, after having occupied it, in connection with this College, for twenty-one years. Dr. J. J. Chisolm has been elected to this Chair.

— *The Maine Medical and Surgical Reporter* is the title of a new medical journal which is sent us from the State of Maine. The editors are Drs. W. K. Richardson and R. W. Cummings. It is published in Portland, and is to be issued monthly, each number to contain 48 pages. The *Reporter* is the only medical journal published in Maine.

— The vacancy occasioned in the Faculty of the Jefferson Medical College in Philadelphia, by the death of the distinguished Professor of Theory and Practice, the late Dr. J. K. Mitchell, has been supplied by the appointment of Dr. Samuel Dickson, of the Charleston Medical College. The resignation of Prof. Dickson of the Chair of Institute of Medicine in the latter institution, leaves a vacancy which has been filled by the appointment of Dr. P. C. Gaillard.

— We have received the May number, being the first, of a new medical journal published in Savannah, Ga., called *The Savannah Journal of Medicine*. Edited by J. S. Sullivan, M.D., and Juriah Harris, M.D.; R. D. Arnold, M.D., Associate Editor. It is a bi-monthly of seventy-two pages, of a neat typographical appearance, and bidding fair, judging from the character of this envoi, to take a prominent stand among the medical journals of the country.

— Savannah, Ga., also sends out another medical journal, entitled *The Oglethorpe Medical and Surgical Journal*. We have not seen a copy of it, but learn from our exchanges that it is a bi-monthly of 64 pages, and edited by Drs. H. L. Byrd and Holmes Steele, of the Faculty of the Oglethorpe Medical College.

— The Jenner Statue has been appropriately inaugurated, and now stands in Trafalgar Square, a tardy honor to the discoverer of vaccination. The fund for the erection of this statue was contributed by all countries, but the largest portion came from America.

— A new medical journal has just appeared at Athens, Greece, entitled, in Greek, "Journal of Medicine." It is to appear once a week, and is edited by Drs. Anagnostakis and Aphendoulis. This makes three medical publications which are now printed in Athens, the two others being monthly in their issue, and are called "The Medical Bee," and "The Esculapian."

— The British Government has bestowed upon Dr. Wynne, of this city, the great gold medal of that country, as an acknowledgment of his services in the cause of science.

Dr. Wynne, who is known to our readers as the author of the articles on the "National Hotel Disease," and the "Influence of the Gulf Stream upon the Summer Climate of the Atlantic Coast of the United States," which appeared in the vii and viii vols. of the MONTHLY, has long been identified with matters pertaining to public health in this country, and in this capacity has occupied many prominent positions. It is his attainments in this branch of science which won for him this distinguished honor.

—Among the many inventions of the age which are adapted to the comfort and elegance of every-day life, and yet have their immediate relations to our profession, we can signalize the Elliptic Spring-Bed Bottom. Beyond the mere result of affording a good bed for well people, that form of it called the invalid's bed is deserving the attention of physicians, and those who are furnishing hospitals. This bed bottom has the merit of durability and cheapness, of elegance and usefulness. It adapts itself to the movements of the body in any position, and can be so arranged as to permit the patient to change his position from a horizontal to a sitting one by a slight manipulation of an attendant. It can be applied to any species of bedstead, is so simple in structure that it cannot get out of order, and yet so elastic that it can well supply the place of a water bed in such diseases as require this form of bedding. For the healthy it is a luxury, and for the invalid a comfort.

—The Sydenham Society, so well known for many years for its publications, having been dissolved, a new society has been formed with the same objects and principles, under the name of the New Sydenham Society. It already numbers more than a thousand members. The annual subscription is one guinea, entitling the members to receive all works issued by the Society during the year. Dr. C. F. Heywood has been appointed the local Secretary for this state and city.

Books and Pamphlets received.

Census of the State of New York, for 1855. By Franklin B. Hough. From Secretary of State.

Contributions to Operative Surgery and Surgical Pathology. By J. M. Carnochan.

Transactions of the New York State Medical Society, for 1858.

Pathology and Treatment of the Paralysis of Motion. By J. P. Batchelder, M.D. From the Author.

On Intra-Capsular Fracture of Cervix Femoris with Bony Union on an interesting case of Urinary Calculi, illustrated by engravings. By Alden March, M.D. From the Author.

Researches on Primary Pathology and the Origin and Laws of Epidemics. In two volumes. By M. L. Knapp, M.D. From the Author.

Of Nature and Art in the Cure of Disease. By Sir John Forbes, M.D., &c. New York, S. S. & W. Wood, 1858.

Mind and Matter, or Physiological Inquiries. By Sir Benjamin Brodie, Bart., &c. New York, S. S. & W. Wood, 1858.

Ventilation in American Dwellings; with a series of Diagrams. By David Boswell Reid, M.D., F.R.S., &c., to which is added an introductory outline of the Progress of Improvement in Ventilation. By Elisha Harris, M.D., &c. New York, Wiley & Halsted, 1858.

THE AMERICAN MEDICAL MONTHLY.

AUGUST, 1858.

ESSAYS, MONOGRAPHS, AND CASES.

On the Movements of the Heart—the Sounds produced, the Pulse, and the Movement of the Blood. By ROBERT NELSON, M.D., of New York.

[Read before the Medical Society of London, May 1, 1858.]

The heart possesses two movements inherent in itself: diastole, or expansion; and systole, or contraction.

The auricle and heart muscles, unlike voluntary muscles, are possessed of a double power—that of expansion as well as of contraction, which act alternately. If the power of expansion did not exist, the blood contained in the arriving veins would enter the auricles slowly and feebly, which is not the case. The next movement is that of contraction, a stronger one than the first. A large amount of this contractile and compressing force of the auricles is wasted towards the cavas, which, being exceedingly extensile and without valves, afford only a slight resistance, the inertia of their contained column, to a return back of their blood into them.

The next movement of the heart, like that of the auricle, is expansion; a force that not only removes all resistance to the entry of the blood, but by its tendency to a vacuum invites the contents of the auricles into the ventricles; were this not the case, each auricular contraction,

pressing on all parts of the mass excepting at the openings, would be so much resisted by the necessity of forcing the ventricles into expansion, that a large portion would be driven back into the almost unresisting cavas and pulmonary veins, and produce a very marked venous pulse in the large vessels; a pulse, though a small one, does take place, and which is very noticeable in some diseases of the right auricular valves.

Proof by Experiment.—Kill an animal by strangulation, drowning, or in any way that makes no wound for the escape of blood from, or entry of air into the vessels, and wait until it has become cold and rigid. On examining the heart, the auricles will be found full of blood, their contractile power having been insufficient to drive their contents into the ventricles, and overcome the last contraction of the latter. Some blood will be found in the right ventricle, sucked into it by the last feeble expansion inherent in its structure; blood will also be found in the left ventricle, but in less quantity than in the right, which is in proximity to the greater quantity furnished by the larger cavas and sinuses than the pulmonary veins. 2. Open the thorax of a living animal of good size, a large dog or pig, slit up the pericardium, and then placing the fingers on the auricles and the ventricles, it will be found how much more feeble is the contraction of the auricle than the expansion force of the ventricle. 3. Make an opening into the scrobiculus and through the diaphragm into the pericardium; next thrust the hand into the latter and grasp the heart. It will be found that the expansion of the heart greatly exceeds in force that of the auricular contraction; should the latter be deemed the injection force to cause the ventricular expansion. 4. Remove the heart of a live animal. It will be found that both the expansion and contraction of auricles and ventricles take place, although there is no blood present to be acted upon, none to be driven by the auricles into the ventricles, and by this means to distend the latter; therefore, this distension is an active and inherent force. These expansions and contractions, without the presence of blood, can be observed for a considerable time.

Having observed the movements of the auricles and the expansion of the heart, let us turn to the contraction of the latter, the ejection of its contents, and the accompanying sound produced.

The strongest motion of the heart is its contraction. This compresses its contents in all directions, forces the blood to escape by any openings, natural or artificial, that may exist. As the openings into the pulmonary artery and aorta afford no resistance, there is only that which is due to the elasticity of these tubes to resist the escape in this

direction. But that portion which seeks to escape by the auricular openings does so only in part, for the regurgitation carries with it the auricular valves as far as they can go—a distance that is limited and suddenly checked. As this check is the *first* arrest to the outward flow of the blood, it produces necessarily the *first* sound; and as the area of those valves is greater than that of the arterial valves, the impulse against them is proportionate to their extent, and the stronger and *nearer* force of the heart. The intensity and loudness of the sound must be proportionate to the surfaces and the impelling force, surfaces and impulsions that greatly exceed those of the semi-lunar valves, and the slow and quasi-passive elastic returning force of the arteries.

The next series of facts to be observed is the arterial pulse and the second sound. But before entering upon this subject it is essential that we should clearly know what the nature and function of an artery are.

An artery is a cylindrical tube of uniform diameter until a branch is given off. Arteries are destitute of any muscular character or property, although muscularity has been ascribed to them by some, and denied by others, to suit the alternate theories of contending schools. However, no difficulty will be found in determining the truth, one way or the other, by those who, if led into doubt by having studied them in small animals, will be at the pains of examining them in the large vertebratæ, as the whale, in which animal, according to its size, the aorta will be found from six to ten inches in diameter, and the elastic coat from seven-eighths to one and a third inch in thickness, as I have had several opportunities of measuring. This thick wall is composed of a uniform elastic substance, capable of distention by a force from within, which ceasing, the inherent and permanent elasticity of the wall enables the tube to contract back to its original calibre. For this elasticity has a limit both ways; it cannot by its contraction either thicken the wall on the one hand, nor diminish the calibre of the vessel on the other, beyond an established limit. Hence it results that, however much or little blood be injected by each ventricular contraction, this force cannot distend the artery beyond its elastic limit without bursting it; and however small the quantity thrown in, the vessel will be found always full, since its elasticity adapts the walls to the contents until this contraction has reached its term, beyond which it cannot go, and cannot obliterate the calibre, therefore leaving a column of blood always in the vessel.

The empty state of the arteries, commonly met with several hours after death, is due to a force operating elsewhere, greater than the

resilience of the elastic coat of the artery, but which will be accounted for hereafter.

The Pulse and the Second Sound.—When the ventricles contract they press their contained blood necessarily in all directions. One portion is forced back, as already mentioned, towards the auricles, carrying their valves along with it, by means of the current, to their limit, producing the *first* sound; the other portion, meeting with no resistance at the arterial orifice, injects a volume of blood into the arteries, driving onward the column already there, and, by the new addition, distending the calibre. This distension from within is sudden and proportionate to the ventricular force, creates the *pulse*—a phenomenon purely mechanical, and which may be produced artificially, by fixing a syringe to arteries removed from the body, or to the ordinary elastic tubing now so common, and is also manifest in the hose of a fire-engine at each stroke of the two pistons.

The Second and Lesser Sound.—The ventricular pressure on the column in the arteries ceasing, the distended artery, by its elasticity, in its turn, compressing the contained blood, forces it to move in the only two ways it can, forward and backward; this last is very partial, since the returning current carries the semi-lunar valves along with itself, until they reach their limit; now receiving a sudden check, which is the cause of the *second* sound, and necessarily the lesser of the two cardiac sounds, since their area is less than that of the auricles; and also, since the arterial elastic force is more gradual and wider spread than the concentrated muscular force of the ventricles.

This valvular check, by its sudden impediment to the return of the arterial column into the heart, causes a slight rebound, as it were, of the column, producing a second, though a very small pulse, but which is quite perceptible in certain states of the arteries, and by persons endowed with a delicate sense of touch.

The arterial current is a continuous one, by reason of the elastic nature of the vessels ceaselessly pressing on their contents, acting like that from the nozzle of the hose of a fire-engine, ceaselessly pressed upon by the elasticity of the air confined in the air chamber of the machine; but this current is augmented in force and velocity by each new injection from the ventricles; hence the striking *per saltum* flow of arterial blood.

Movement of the blood through the veins is produced by three distinct mechanical forces, and most probably a fourth one, that cannot be demonstrated as mechanical, but which is self-evident, and possibly a physiological one.

The first force acting on the movement of the blood in the veins is that furnished by the heart and arteries. The ventricular injection into the arteries, and the ceaseless pressure of the latter on the column, drives their blood through what are called the capillaries into the veins. This force was stated by Majendie to be the only one, seeing that the flow through a corresponding vein ceased when a ligature was tightened on the afferent artery, and was again renewed when the ligature was loosened. So far this is true at the *moment* of the experiment, but it leaves the subsequent facts unnoticed. This one fact is of easy corroboration, even on a dead vessel, by simply injecting the artery with an appropriate fluid. The immediate influence of the elastic arterial force is carried so far in some instances as to give the venous current a *per saltic* flow; as when, in hot weather, a person has undergone violent exercise: should in this case the arm be tied up, as for phlebotomy, the stream of the blood rushing through the orifice made in the vein, though continuous, will extend its arch at each arterial pulsation; the entry of the blood from the arteries is so free that some of the arterial blood will arrive into the veins unchanged, rendering the venous blood proportionately florid, or arterial. In cold weather, cold extremities, and cold stage of ague, the reverse is apparent.

The second force acting on the venous current is furnished by the pleural vacuum of the thorax. It not only draws air into the lungs and retains a large portion of this air in them, but it leaves still an unsatisfied vacuum in the thorax, to aid in filling which blood rushes into the cavas, and from the pulmonary arteries into their veins. This vacuum is constantly acting during life, after the cessation of respiration and the action of the heart, and for a long time after death—for days and weeks. This fact can be demonstrated in several ways; if two or ~~three~~ days, and even weeks after death, an opening be made into the pleural cavity, air will be heard rushing in until the lungs collapse (though they never do so completely).

In the winters of Canada an abundance of the best anatomical subjects are obtained frozen, and so kept until wanted, when they are thawed and used for dissection. It may happen that the thorax is not opened until after many days of dissection have been carried on; in this case, though the lungs by time have become semi-putrid and flabby, still the diaphragm is found arching high up into the thorax; if the diaphragm, or costal pleura, be now punctured, air will rush into the pleural cavity, the diaphragm will descend and become flabby, and the lungs collapse and recede from the costal pleura. In all these

cases the cavas and subclavians will be found filled with blood, and the anterior part of the neck dipping in under the top of the sternum. Should a long time have elapsed since death, the cavas will not be found so full; but this is owing to the trans-oozing of their serum into the tissues below. Now, since this vacuum is so powerful and persistent, it must be admitted to exist during life, and in this case to operate largely in inviting or sucking the blood into the thorax, first into the large sinuses, then into the next nearest veins, and again, the next beyond, to a great distance; and the atmospheric pressure on the surface aids in pressing the blood inward from the smaller to replace that drawn in through the larger veins. It is this vacuum that so largely aids the hepatic circulation—one that suffers no *vis-a-tergo* from arterial impulse.

If at the time of death the thorax be opened by wounds, &c., the cavas will be found only moderately full of blood, and not distended, as is the case when the pleural vacuum is maintained.

The third force that aids, but only slightly so, the flow of blood through the veins, resides in the expansion power of the auricles, drawing into them the nearest blood in the cavas, relieving their distension and affording room for the entry of blood from a distance beyond.

As yet it will be seen that the motive power, acting on the blood, is purely mechanical.

The fourth power or force, although evident and proveable, is not easily explained. Half an hour after death the surface of the body becomes mottled, by the presence of apparently stagnant, dark, venous blood; this takes place in the elevated parts of the body, even in the whole wing of the ear, as well as in the most dependent, long after the impulse of the heart and the elastic pressure of the arteries have ceased to drive their blood onward. If the ear or one of the mottled spots be pressed upon, the interstitial, apparently stagnant, black blood will be driven away, but will again return as soon as the pressure is removed. There is, then, a movement of the blood still carried on, and it will continue until the whole is removed from the skin, leaving it white, in all the superior parts, and more or less whitened in the recumbent parts; for this force is not sufficiently active completely to overcome the force of gravity. Should death have been produced by hepatization of the lungs to a great extent, or to extensive empyema, the mottled state will persist for many hours—twenty-four or more; this will be, more or less, accounted for from the vacuum ceasing, either from the inability of the lungs to collapse, by reason of

their solidification, or the effusion filling the pleural vacuum to satisfaction.

How far the entry of the blood into the veins is aided by that peculiar adhesive property belonging to blood globules which causes them to follow each other in strings, it is unnecessary at present to remark upon.

Emptiness of the Arteries.—Since the elastic contractility of the arteries has a limit and cannot obliterate their calibre, they are always found to contain at least one quarter of their maximum quantity shortly after death—that is, after respiration and the action of the heart have ceased, which is not complete or absolute death. But after the body has become quite cold and rigid, they will be found empty of blood; and as neither air nor any other fluid has entered them to replace this abstracted quantity of blood, the arteries will be found not shrunk into round cords without a cavity, but as flat, thick, double tapes, one side touching the other. The power that draws the remaining blood out of them is so strong that it forces the cylindrical wall into flat proximity, in spite of the elastic resiliency that persists in efforts to restore the calibre. Should a cut be made in such an artery as to admit air, it will immediately, by its elasticity, resume its cylindrical form and open calibre, air rushing in to satisfy the vacuum that drew the sides together. It is such cuts into the arteries during autopsies that leave them round, hollow, and empty, and gave to them the name of artery, and the supposition that they were the carriers of air or spirit; and though this idea has been long exploded, the fact of their emptiness of material fluid leaves the subject still shrouded in uncertainty or unexplained. Kill an animal, by strangulation or any other means that does not wound the arteries, and suffer several hours to elapse to give time for the interstitial mortuary circulation to be completed; after which carefully lay bare the carotid, or the femoral artery, without opening it. It will be found to resemble the tape already mentioned; and if a cut be made into it, air will rush in, permitting the elastic resilience of the vessel to expand it into cylindricity. This admission of air will spread into all the large arteries, and even into the heart, from the same expansive cause, where its presence has often been mentioned as a pathological fact, while in reality it is only accidental. Should death be the result of wounds penetrating the arteries, they will of course be found round, hollow, and containing air. Should, at the time of death, the thorax be opened without wounding the arteries, they will for a long time retain a quantity of blood, as in the case of pulmonary solidification or empy-

ema, because the vacuum force of the thorax has ceased to draw on the veins.

The emptiness of the arteries and their flattening is then due to two forces—a vacuum and an interstitial circulation or movement; and because the pleural vacuum can with difficulty reach through the hepatic system to the mesenteric arteries, they are never found so completely empty as the arteries belonging to the extra digestive system.

*Milk—Its Composition and Changes.**

Increase of knowledge bears with it two inevitable consequences—mankind learns the art of adulterating articles employed for the wants and comforts of the race, and the means of detecting such adulterations. In this way, science bears along with it the weapons with which it can protect from the very frauds that an improper employment of its knowledge produces. It must, however, be arguè-eyed in order to seize hold of the protean forms that such an improper use of its principles can assume, and in this way its votaries must be supplied with never-wearying diligence and enthusiasm. In nothing belonging to the ordinary articles of food shall we find more expertness evinced in the production of shameful adulterations, than in the simple substance *milk*; yet science has followed up these adulterations closely, and shown how they may be detected, and the citizens of our large towns be protected from them. The subject is now attracting some attention in our cities from the proper municipal authorities; and, with the view of bringing before the readers of the MONTHLY the present state of knowledge on this subject, it is proposed in this article to consider the subject of milk in general, promising in a future article to present a resumé of the different modes of detecting adulterations, and of estimating the value of milk. The treatises, whose names are given at the foot of this page, will be the chief sources from whence our material will be drawn.

Physiologically, milk may be considered as being composed of three substances: 1. Serum, holding in *solution* lactine, some casein and other proteic bodies, extractive matters and salts; 2. A second condi-

* DU LAIT EN GENERAL. *Par M. Bouchardat et Th. A. Quevenne, Paris, chez Mme. Ve Bouchard-Huzard. 1857.*

DU LAIT. *Thèse soutenue le 23 Décembre 1856, par le Dr. P. O. Reveil, Pharmacien en chef de l'Hôpital des Cliniques, &c., &c. Paris: A. Lacour, 1856.*

tion of casein in a state of suspension in the serum under the form of very minute granules: 3. Butter, which is suspended in the same liquid in the form of globules; the two latter give to milk its characteristic opacity. The different forms in which milk is sold, from the dairy, depend upon the presence of all these constituents or the abstraction of one or more of them. *Skim-milk* has been deprived of much of its fatty matter, though still containing “nearly all the cheese, the sugar of milk, some butter, and the salts of milk; it is therefore scarcely less nutritious than new milk, but, in consequence of the diminished amount of fatty matter, is less adapted to the development of fat, and to the maintenance of respiration and the temperature of the body.”* *Butter-milk* contains still less fatty matter than skim-milk, while *Cream* consists of the fatty matter in combination with some casein and lactine.

Under the microscope the milk globules become visible. They are formed by the fatty matter, and are of different sizes. Two views have been held as to their constitution; that they are enveloped in a caseous membrane, and that they consist simply of butter swimming in a liquid precisely as oil in the case of an emulsion. Bouchardat and Quevenne hold to the latter view, and show that there are no enveloping membranes to these globules, and that the process of churning, which was supposed to consist in the disruption of the membranous coverings of the fat globules, is only an illustration of the fact that solid fatty bodies will agglomerate when floating in a liquid, should violent agitation be employed. Quevenne further sets forth the following facts as being very discordant with the existence of an enveloping membrane. If milk be exposed sufficiently long on a stove, the butter will unite in the form of oily drops on the surface of the liquid; if fresh cream be placed on plaster newly mixed, so as to ensure the absorption of the little serum left, it is only necessary to knead the remaining mass with a little water to remove the casein and to make the fat globules agglomerate in the form of butter; when milk is acted on by ammonia, which dissolves the casein that is suspended, and should also dissolve the enveloping membranes, the fat globules are not changed under the microscope. These facts go far to support the idea that these fat globules are devoid of organization.

The number of substances which make up the three physiological constituents of milk is quite large, some of which have been but lately discovered. It will be interesting for those of our readers who are

* Hassall's Adulterations, 205.

not familiar with the labors of modern chemistry, to see how complex is the composition of a substance generally considered so simple.

Butter is formed by the union of {
 Oleine,
 Butyrine,
 Caproine,
 Capryline,
 Caprine,
 Myristicine,
 Palmitine,
 Stearine,
 Butine,
 Lecithine, or phosphorous fatty
 matter.

All the substances obtained by co-
 agulation through acids or heat have
 been considered, down to a late date,
 as a simple body under the name of
 casein, {
 Albuminoid matter,
 Casein in suspension,
 Casein in solution,
 Albuminose.
 Lactine,
 Phosphate of Lime,
 " Magnesia,
 " Potassa,
 " Iron,
 " Manganese,
 " Soda,
 Chloride of Sodium,
 " Potassium,
 Soda in combination with case-
 in, or some organic acid,
 Salts, with a potassa base,
 " with an ammonia base,
 Silicates,
 Fluorides,
 Sulphur,
 Iodine,
 Urea.

The four substances which constitute the proteic constituents of milk have only, within the last few years, been recognized distinctly. Albumen was formerly considered an abnormal constituent, and only present during disease or at the time of parturition. In 1841, Quevenne found something of an albuminous nature in milk, sometimes plainly coagulable by ebullition, though mostly only manifesting itself through a slight turbidity of the liquid. Mitscherlich, in 1847, announced to Quevenne that he had been enabled to prove the presence of this substance in milk. Doyère, in 1851, being ignorant of the results obtained by these experimenters, determined the presence of albu-

men in milk, and announced it in a paper published in the collection of the Agronomic Institute, of Versailles. His results were confirmed by Girardin, in 1853, and by Morin, in 1854. This *albumen* imparts to the watery portion of milk the property of forming flocculi directly by ebullition, or at least of becoming slightly turbid; and in this case the liquid will leave a deposit on the filter through which it has been poured.

Quevenne proved that a part of the casein was in a state of mechanical suspension. If fresh milk be poured on a double filter of tissue paper, the liquid which passes through has a lower sp. gr. than the milk itself. This proves that the material on the filter must contain something heavier than fatty matter. On analysis of the same, it is found to consist of butter and casein. The microscope will show in asses' milk this suspended casein, in the form of very fine granules of a peculiar aspect, soluble in ammonia and insoluble in ether. Bouchardat has also detected it in the milk of the cow. Donné has confirmed these observations. This form of casein is susceptible of coagulation by the use of rennet, after the separation of the dissolved casein.

If we remove the suspended casein by filtration or the use of rennet, and the albuminoid material by ebullition and a second filtration, and then raise the liquid a second time to the temperature of ebullition, adding a little dilute acetic acid, there will be formed some white curdy flocculi which are due to the dissolved casein. This is not affected ordinarily by the rennet employed for the coagulation of milk in the manufacture of cheese. It is not coagulable by heat alone, although perfectly so when acids are employed.

After the removal of the three proteic substances just described, there still remains in solution a small quantity of another proteic substance. This is not coagulable by ebullition nor by acids, although it can be precipitated by tannin, and by alcohol. This receives the name of *albuminose*, or *peptone* according to Lehmann, or *galactine* according to Morin.

In addition to these four, there is no doubt but that there are other proteic substances, among which may be mentioned *oxolecine* and *anoxolecine*, so that the composition of the caseous portion of milk is really very complex.

Butter is the aggregate of the fatty materials, and that from each animal is possessed of some peculiar characteristic taste, odor, and appearance, differing from all the rest. That of the cow, in summer, is yellowish when the animals are fed on fresh herbage, and in winter it is paler, being nearly white. Goat's butter is of a paler

yellow, inclining to a citron. That of the ass is whitish, becoming occasionally of a pale yellow, and is without aroma, while that of woman is of a greenish yellow. It melts generally at 112° F.

In butter there is found a substance, called by Gobley *lecithine*, of a phosphorous character, which is analogous to the *oleo-phosphoric* acid that Fremy obtained from the cerebral fat. This substance is composed of phosphorus in direct combination, just as oxygen, hydrogen, and carbon unite in the formation of organic compounds. May not this *lecithine*, on account of the presence of phosphorus, be a most important constituent of milk, supplying to the young animal this important substance in a form readily appropriated for the uses of brain structure.

Bouchardat and Quevenne have detected urea in asses' milk, their attention being attracted by the appearance of a white crystalline powder which was deposited at the bottom of the vessel containing the butter made from this milk. Morin supposes that he obtained the same principle from cows' milk. Urea has thus been found in urine, sweat (Favre,) milk, chyle (Wurtz,) and in the liquids of dropsies.

Lactine can hardly be considered a true sugar, since it fails to undergo, in a direct way, alcoholic fermentation. Under certain circumstances, it undergoes such modifications as make it capable of transformation into alcohol. Thus, certain nomadic tribes are enabled to procure different spirituous liquors, such as the *koumiss* of the Calmucks, which is made from mares' and camels' milk, the Pinna of the Lapons. By the distillation of koumiss a brandy is obtained.

The salts contained in milk are quite numerous, and analysts have given different percentages as the result of their examinations. Regnault gives the following proportions in 1,000 grammes of milk:

Phosphate of lime.....	1.805
“ magnesia	0.170
“ iron.....	0.032
“ soda	0.225
Chloride of sodium	1.350
Carbonate of soda.....	0.115
	<hr/>
	3.697

With these remarks on the nature of some of the constituents of milk, that are not particularly noticed in our text-books, and which are among the recent discoveries of chemistry, we propose now to consider the alterations or changes it undergoes from various circumstances.

Prominent among the alterations may be mentioned those depending upon the time of day the milk is withdrawn from the animal. In the morning it is denser and less rich in cream than in the evening. After having been skimmed, it still shows a little greater density, although it retains more cream than skimmed evening's milk. The morning's milk, according to Schubler, furnishes the most butter, that of noon the least, and of evening an intermediate amount.

Milk taken at different periods during the milking also differs in its constitution. At the beginning it contains less cream than at the end. Parmentier and Deyeux show that where an animal is employed to furnish milk to several persons, the amount of cream obtained by each differs. The first will get milk most abounding in serum, and the last that which is richest in cream. Reizet has shown, that in order such a difference should be found, the milk must have remained more than four hours in the mammæ, and that if the operation of milking be performed every two hours, this difference between the composition at different periods in the milking is not observed. At first glance, one might conclude, that as the milk which is first drawn is poorer in cream than that which is obtained afterwards, the same sort of separation of cream from milk takes place in the mammæ as when the liquid is at rest in an unorganized vessel. On the other hand, however, it will be found that in the case of the goat, where the bag is pendant like that of the cow, but slight difference as to richness in butter can be detected between the first and last milk of any particular milking, while in women, although the mammæ are horizontal, the milk shows the same difference as in the cow.

Influence of Food on the Milk.—Certain kinds of food affect to a great extent the nature of the milk, and even impart to it a peculiar odor. Garlic and the cruciferae give it their characteristic odors; artemisia makes it bitter, and madder communicates a reddish hue after a few days' use. A large number of mineral substances pass from the system in the secretion of milk, such as common salt, iodide of potassium, bi-carbonate of soda, while the milk of those under mercurial treatment affords, according to Personne unmistakable evidences of the presence of mercury. Reveil had detected the presence of mercury in goats' milk when they were fully under the mercurial influence, but Personne discovered it when it had only been given in therapeutic doses. "The importance of this fact may be understood in the treatment of syphilitic affections of young infants; it will suffice to administer the mercury from animals; the metal thus *dulcified*, as we may say, by contact with the milk, is better supported by infants; and for some time

past, Damoiseau, the conscientious *nourisseur* of the boulevard Pigale, has been administering mercurial preparations to some she-asses which he keeps for the use of the public.”

The milk of animals supplied with vegetable food contains always, in variable proportions, the four kinds of materials which make up the food of the herbivora, viz., albuminoid materials, represented by casein; fatty matters, represented by butter; saccharine substances by sugar of milk; and salts of divers kinds that exist in all the tissues and fluids of animals. There is great diminution, however, of lactine in the milk of the carnivora. The milk, even in this case, corresponds in its constituents with those of the food employed.

The food also in woman controls the nature of the milk secreted. A good illustration is afforded in a case cited by Doyère. A nurse, aged 45, was nursing two large children, her own being 17 months old. Her food was nutritious during the first three days of each week, but during the four days following she was obliged to eat bread and peas, and these in quantity not sufficient to satisfy her hunger. Two analyses of the milk, made on Tuesday, gave as a mean:

Butter	75.20	}	162.70
Casein	6.30		
Albumen	5.70		
Sugar ..	74.00		
Salts	1.50		
Water	837.30		

The mean composition of two specimens of milk from the same woman, taken on Saturday, was as follows:

Butter	50.90	}	138.30
Casein	4.10		
Albumen	11.00		
Sugar	70.50		
Salts	1.80		
Water	861.70		

The first day of the year the woman went to the relatives of her foster-child, and after having fared well all day, she dined in the evening and passed the limits of sobriety. The following day she was very much fatigued, and her milk gave the following composition:

Butter	41.00	}	127.70
Casein	2.80		
Albumen	3.90		
Sugar and Salts	80.00		
Water	872.30		

In the experiments of Simon, Doyère, Vernois, and Becquerel, two

circumstances appear as constant; 1, there is great diminution in the butter under the influence of defective alimentation or following excesses at the table; and 2nd, this diminution involves a diminution in the total weight of all the solid constituents. Boussingault and Le Bel conclude, from their experiments, that the nature of the food does not exercise a very marked influence on the quantity and chemical constitution of the milk, provided cows receive proper nutritive equivalents of different kinds of food.

Colostrum.—This name is given to the milk which is secreted a few days before and after parturition. It differs from normal milk in that it is rich in albuminous material, contains little or no casein, and coagulates by ebullition. Its properties were first studied by Van Striptian and Bondt, and afterwards by Parmentier and Deyeux. Lassaigne found that, for forty days before parturition, cows' milk contained only albumen, without any casein; ten days after parturition it became slightly sweet, and that it then contained all the ordinary elements of milk plus a small quantity of albumen. The density of colostrum is from 1052 to 1062. It often contains streaks of blood, and, examined under the microscope, it presents peculiar globules, composed of mucous and fatty granules, the latter soluble in ether, and the former in acetic acid. Colostrum putrefies rapidly when exposed to the air.

An important question connected with the changes which the colostrum undergoes in becoming true normal milk, is at what age it can be considered as fitted for alimentation. Bouchardat shows that it is right to believe that nature, in modifying the character of the milk in the mammalia, conforms its composition to the successive changes which are taking place in the organs of the infant, so that the first milk, the colostrum, is best suited for the latter at the period of birth, and the milk undergoes alterations in harmony with the necessities of the system for a more substantial aliment. If we wish then to obtain milk for a new-born babe, it will be prudent to take that from a *fresh* animal, continuing the use of milk from the same, since it will become daily more nutritious. "For an invalid whose digestive organs are in a state of extreme debility, we should, in accordance with the same reasoning, employ the milk of an animal that had calved recently;" and when the digestive organs are not specially affected, the more nutritious milk of greater age should be used. These points have not attracted the attention of hygeinists to the extent the importance demands. Cows' milk should not be employed as an ordinary article of food until three or four weeks have elapsed from the period of calving;

it may then be considered as normal and suited for such purposes. Still, even at that time, it will not abound in the unctuous property and savory taste which it will possess at the age of six or eight months.

The effect of brewers' grains and still-slop, which are largely employed as articles of food for cows in our cities, upon the quality of milk, is undoubtedly detrimental. Whether the milk derives any special injurious substances, in addition to its loss of those which are beneficial, we are at present not able to state. One thing is sure, that the milk which is secreted under the stimulation of this kind of food will not present the same amount of solid constituents as that obtained from cows whose food has been of a better quality; and further, we have the right to conclude that any food which will beget disease eventuating in death must necessarily vitiate all the secretions of the body. The secretion of milk is affected by very slight causes indeed. Moral causes may so affect it in the woman as to make it really a poison to her babe. Vernois and Becquerel found the proportion of butter to be reduced from 23.79 in 1,000 grammes to 5.14 in consequence of grief on the part of a nurse. This portion of the subject needs especial study; and if some of our microscopical chemists will devote themselves to the nature of the alterations produced by improper food, and disease on the secretion of milk, discoveries may result that will be of the greatest utility to society. The question is attracting the attention of the non-professional, as well as that of those who belong to the ranks, and it becomes the latter to make some effort at obtaining a rational and satisfactory solution of it.

One important point in the consideration of this subject is the question, whether milk can be preserved for a long time after its removal from the cow. Appert, at the beginning of this century, endeavored to ensure its preservation by concentrating it, and then keeping it in closed flasks. Several other methods have been proposed in Europe, and have succeeded to a certain extent. In this country two methods have been used with reference to its preservation. The first, by Blatchford, of New York, depends upon the admixture of 125 pounds of milk with 25 pounds of sugar, and then exposing it to the action of heat in order to drive off the aqueous portion. The solidified mass can be preserved for years without any notable change. A block of this milk has been in our possession for four years, and is as good as when first made. The presence of the sugar is an objection to its use with some persons. The other American method is that of Gail Borden, Jr., which consists in carrying on the evaporation in a vacuum, without the addition of sugar or any other substance, until the milk is either

highly concentrated, (as when required for use in a few days,) or absolutely consolidated. This is the better method, and commends itself to the consideration of the citizens of our large cities, as a reliable way of getting pure milk, freed from the adulterations which too often exist in our city *milk-cans*.

L. H. S.

NAPLES, *February 22nd*, 1858.

To the Editors of the American Medical Monthly:

GENTLEMEN:—If the urgent demands of country practitioners for cases and prescriptions will not forbid you to spare a place in your practical journal, where the value of words is weighed by the ease with which they will cure a fever, or the use to which they may be put in the next epidemic, I would request it for a little idle gossip about matters in this oldest of empires, which, as they have interested me, may perhaps at least amuse your readers, although they shall not furnish a single idea on the practice of medicine. I propose to throw together the results of a little cursory observation of things interesting to a professional traveller in the course of a brief tour through Italy. In medicine, as in every science and every art, the traveller is at once impressed with the patent fact that Italy is retrograding; that she is not now what she has been; that, travel where one will through her fair domain, he finds, in the midst of all her beauty, ruined palaces, shattered monuments, deserted cities—that, as once noble structures were erected here in the minds of thinking men as they pondered on the mysteries of the wondrous mechanism of their own bodies, and the many and strange derangements to which it was liable, so *now* the national mind is but a vast waste, with here and there a ruin to tell of great intellects long since gone.

But it is not to be forgotten, that as to the relics of her departed glories we look for our fairest models in architecture, our noblest masters in the arts, so from her we have derived much of the knowledge of our own science, many of the refinements of our own art, which she has suffered to pass from her, while we have made them our own. Italy, the mother of the arts, has not now an artist worth the ivy, and Italy, the seat of medicine, boasts not a physician whose name will live beyond himself.

As to the general traveller, few spots in this interesting country possess a stronger interest than the long buried city of Pompeii, with its deserted, and yet strangely new and habitable streets; so the physi-

cian finds few places where he feels more inclined to linger than in the surgeon's house, in this city of the dead. I know no reason why the establishment should be conceded, as it universally is, to our brethren of the knife, for medicinal preparations were discovered there as well as surgical instruments. The probability is, that the worthy man who formerly inhabited this snug little domicile, and, his night-capped head full of Alexandrine love, answered the nightly raps on its door from his second story window, (there was but one dwelling in all Pompeii which appears to have had more than two stories,) united the two branches in his solitary person, as is now the custom in all our country towns; and that, moreover, he added to these functions that of being his own apothecary; for not only were tablets and spatulas, but even the ready-made pills discovered in his office, as well as neat little scales, balancing to a fraction, with weights on which were inscribed on the one side, "*eme,*" *buy*—on the other, "*habebis,*" *you shall have*—a gentlemanly way of stating to his customers that the *cash* system prevailed in his establishment. But it was fitted up in front with a marble counter and a small set of marble shelves, arranged like steps, on which to array his wares. The small dimensions of his house sufficiently indicated that, like his brethren of to-day, the physician in Pompeii did not find, that even with his practice among lordly *equites* and rich patricians, his fees sufficiently overbalanced his expenses to enable him to live in a palace; and when it is said that his dwelling does not stand on the street of fortune, it will be understood that he was not a Fifth Ave-noodle.

Although there is internal reason for believing that the rouge pot found in the toilette chamber of the beautiful Julia, daughter of Diomedes, the impression of whose voluptuous breast may still be seen in the hardened mud taken from the cellar of her father's house, wherein the family had sought refuge from the fearful storm; although I say there is reason to believe that this rouge came from his shop, and that, like men of the pestal now, he lent his genius to aid the charms of the sex, let us hope that the purity of his marble shelves was not sullied, as it might have been had he lived in our enlightened day, with the presence of other and more dangerous nostrums, the inventions of Roman Holloways and Jaynes.

The instruments discovered in this house are to be seen at the Bourbon Museum, in Naples; and for myself, having never seen a description of them, I was really amazed at their perfection and beauty of finish.

A work is now in process of preparation under the Royal auspices,

in which all the objects of interest in this most interesting Museum will be represented by fine engravings. This part of the collection has, however, not been reached, and I am not aware that there are any engravings published of these very remarkable relics. Through the politeness of the *custode*, I was permitted to take some hurried sketches of the more important ones, which, imperfect as they are, may still serve to give an idea of the originals. The largest and most interesting among them is a *Uterine Speculum*; and the ocular evidence that this much vaunted and certainly invaluable *modern* discovery was in familiar use, and carried to so high a degree of perfection so many years ago,* is almost enough to make the boastful spirit of Young Physic bow its head to the superior wisdom of the wise man, and exclaim with him, "nothing new under the sun."

As the drawings of the plate are in perspective, a little explanation may be necessary to make them understood.

(A,) the *Uterine Speculum*, is composed of three blades or valves, (*c, c, c,*) each attached at a right angle to a separate handle, (*a, a, b.*) Of these handles, two (*a, a,*) are curved, and correspond precisely to one another, passing through the sliding piece (*d,*) to which the third handle (*b,*) is attached, and having their fixed point at (*e,*) a stationary crosspiece through which passes the third handle, which is, in fact, for the greater part of its length a screw. It will at once be seen that as this screw, acting from the fixed point (*e,*) increases or diminishes the distance between it and the slide, (*d,*) it at the same time, in consequence of the curves of the two other handles, increases or diminishes the space contained between the three blades; and so nice is the adjustment of these curves, that the distance of each blade from the other two is increased or diminished to precisely the same extent, thus ensuring an equal pressure in every direction.

When brought together, they form a single round shaft about the thickness of the little finger, and having, it will be noticed, much the shape of the nozzle of an enema syringe. Separated to their fullest extent, they enclose a space of about two inches. The length of the blades is from four to five inches. (They are seen much foreshortened in the plate.) That of the handles about twice as great, so that the hand of the adjuster would in no way interfere with the view. The delicate adjustment, ingenious conception, and practical adaptability of this instrument, cannot fail, I think, to impress every one who sees it.

Analogous to this is the Anal Speculum (*B,*) with its two blades,

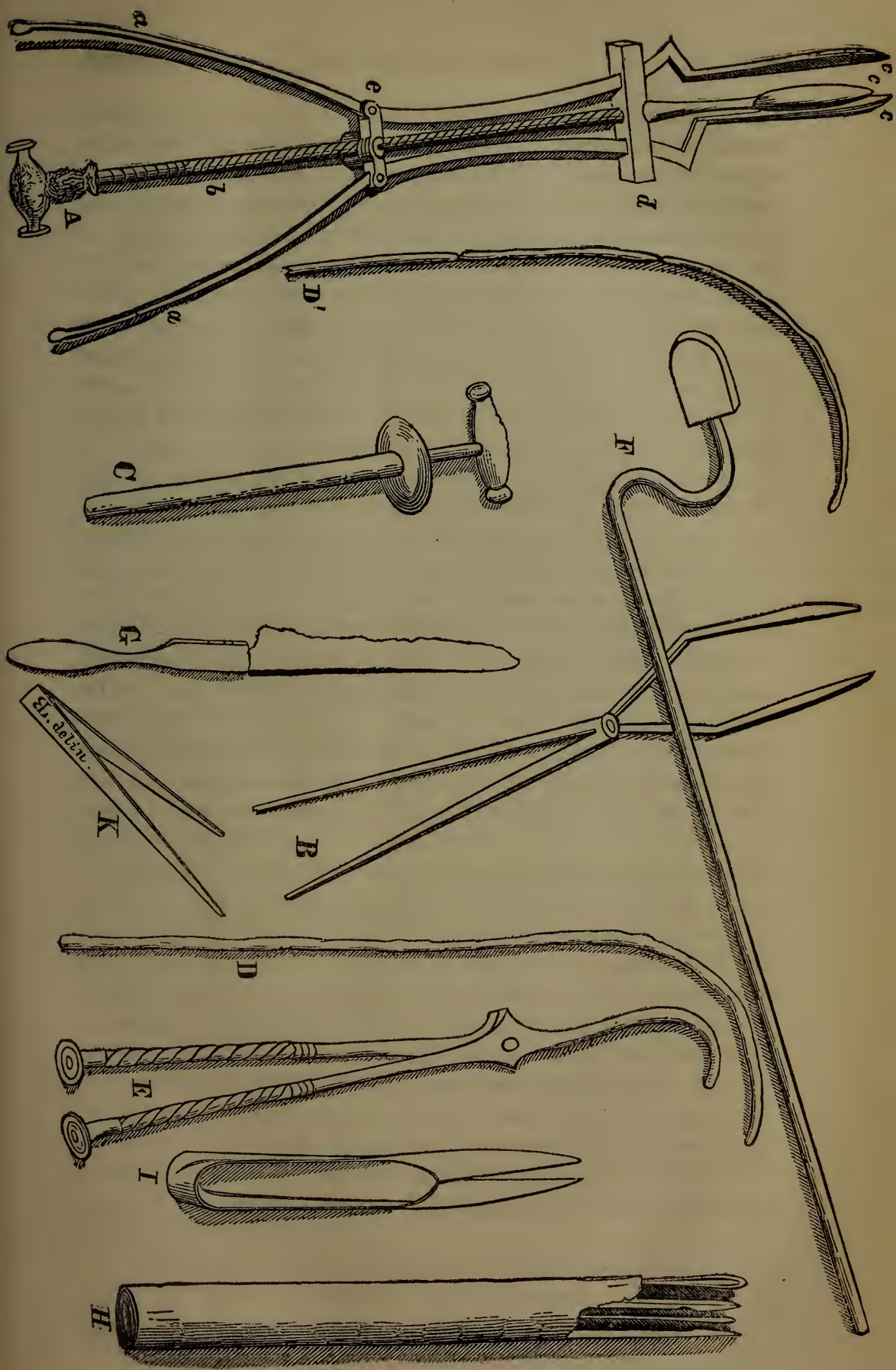
* The eruption which destroyed the city, occurred in the year 79 of our era.

(*a, a,*) also at right angles to their handles. (*C,*) called the trochar, has its sheath of silver. Its extremely small orifice would lead to the supposition that it might have been used for somewhat the same purpose as that to which the small exploratory trochar is now put, viz., the evacuation of cavities into which it is important to prevent the introduction of air, although its large calibre would hardly seem to countenance the idea. (*D,*) a specimen of a large number of sounds and catheters, some of them of silver. Of these, one (*D'*) struck me as resembling not a little, in its careful graduation and slightly bulbed point, Prof. Simpson's uterine sound. The occurrence of these strictures at such regular intervals can hardly be attributed to the chance work of time and corrosion, although they have doubtless increased them. The forceps (*E,*) are furnished with serrated teeth, the modern bull-dog forceps, and were probably, like them, used for taking up vessels, as their point is quite fine. The cautery (*F,*) is so like those now in use, or I should perhaps more truthfully say, those now in use are so like it, (for this article has probably been more or less in use constantly from that time to this,) as to need no comment. The *Scalpel* (*G,*) has a blade of wrought iron set into a bronze handle, and in this respect, as well as in its general shape, is a model of all their ordinary knives. Their size, of course, varies. I saw none larger than a small amputating knife; a thumb lancet preserved its point, and appeared to have quite a good edge, and the shape of a gorget was too perfect to allow it to be mistaken. The pocket case (*H,*) contains a lancet, a small scalpel, needles, and probes of different shapes; on the left, one is seen with a scoop, another might pass for a grooved director, although there is not enough of it visible to be able to assert it to be one. A third, I took for a female catheter. The scissors (*I,*) and thumb forceps (*K,*) will readily be recognized. If the existence of this ancient speculum throws some light upon the treatment of uterine disease among the Romans, there is, perhaps, also a hint to be gained from certain other relics of this collection. I refer to the theatre tickets of bone or ivory, the value of which did not end with the simple theatrical representation, and which bear the singular device of an eye within a vulva. Would not this seem to indicate that if the foul malady, of which our own land is credited with the origin, did not then exist, there were still certain consequences of promiscuous intercourse against which the cautious but voluptuous Roman thought well to guard himself by ocular inspection?

Should you find space for this, gentlemen, I will endeavor to follow it by another, as objects of interest present themselves.

With great respect, yours,

BENJAMIN LEE, M.D.



SURGICAL INSTRUMENTS FOUND AT POMPEII.

ROME, *April 1st*, 1858.

MESSRS. EDITORS:—In my last I gave some account of the instruments found in the surgeon's house in Pompeii. The traveller, who, as is proverbially the case with Americans, is pressed for time, may spend a morning in this "city of the dead," and taking the cars in the afternoon, be whirled along at the rate of seven miles an hour to the town of La Cava, where, if he be fortunate enough to escape with his life from the clutches of the clamorous vetturini, of whom New York hackmen are as it were but a faint foreshadowing, a ride of two hours along a magnificent mountain gorge, (in the course of which he will see women and children down to 7 years of age, boys and girls, at work on a railroad, carrying stone and dirt on their heads,) brings him at dusk to the famous town of Salerno, the only point south of Naples which possesses any particular historical interest to the physician.

There is nothing whatsoever, at present, to tell of its former pre-eminence as a seat of medical science, although it still boasts a small University—and its Cathedral, within whose sacred walls, rich with heathen trophies, the bodies of reverend Archbishops quietly repose in Sarcophagi, covered all over with reliefs representing the triumphs of Bacchus and Ariadne, and the Rape of Proserpine, is the only thing to remind one that it was once a populous and flourishing city, although its admirable situation at the head of the beautiful bay of the same name would have ensured its being so at a time when the entire country was peopled with an active, industrious, and enterprising population.

Flourishing, however, as was its commerce, and great as was its military renown, it was to its medical college that it owed its greatest fame. This institution was visited by students from all parts of Europe, and was, in fact, at the time of its greatest glory, at the close of the twelfth century, what the school of Paris is to the modern medical world. Indeed, that good old divine, Thomas Aquinas, assigns it in his day the same rank in medical science that Paris then held in general science, Bologna in law, and Aurelianum in letters.

The course of study appears to have been a very thorough one—a seven years' attendance upon its lectures being requisite to graduation, as well as a public examination before the assembled learning of the city in the works of Galen and Hippocrates, the medical classics and text-books of the day.

One requirement there was, which is a strange comment on the manners of the day, and which it is to be feared would somewhat diminish the number of French students were it at present in force at Paris,

viz., a proof of legitimacy of birth. If the newly graduated physician intended practising in the city of Salerno itself, it was necessary for him to follow first for one year the practice of an older physician.

They had, too, even in those remote days, what is so greatly needed among our enlightened selves—a law forbidding any man to dispense medicines as a druggist who was not furnished with a diploma from the college, testifying to his having followed a regular course of study. But, alas! how are matters changed there now! In all that town of 16,000 inhabitants could I not find an apothecary who knew what *Tinctura Opii* was. The dogmas of the school were at one time rendered into Latin doggerel, and dedicated to Edward the Confessor, King of England.

The following translation of a quartette in praise of an article of the *Materia*, which is now scarcely so highly esteemed, would seem to indicate that the Faculty of Salerno were as fond of Tisanes as that of Paris:

“Why does man die while sage grows for him in the garden?
Is there not a remedy against death in the fields?
Salvia! Salvation! Nature’s mediator!
Salvia with Ruta will make thee a safe potion.”

Another of these aphorisms might convict them of a leaning to Homœopathy. It is, in fact, a little singular that some smart quack among the Infinitesimalists has not adduced it in proof of the antiquity of their ideas. It certainly has its followers in our day, whatever may be the opinion of the schools upon it. It runs as follows:

“*Si nocturna tibi noceat potatio vini,
Hoc ter mane bibas iterum et fuerit medicina.*”

Which may be modernly rendered:

“If you feel yourself worse for your last night’s wine,
Drink it thrice o’er this morning, and be that your medicine.”

A ride of wonderful beauty northward along the coast from Salerno, brings us to Amalfi, perhaps the most picturesque town on the whole coast. On the elaborate fountain in front of its magnificent cathedral is a Latin inscription which claims for the place the honor of the discovery of the mariner’s compass, an assumption which, for hundreds of years, was granted to it without dispute. Modern research has proved that it was in use at least a century before the supposed time of its discovery here, by the Arabs in navigating their “ships of the desert;” but it is not at all improbable that the commercial rela-

tions of the Amalfitans with the Eastern nations, which, at a time when the Republic could send out its fleet of 100 vessels, must have been very extensive—may have put these hardy navigators in possession of this valuable discovery at a much earlier period than that at which the more remote nations of Europe became acquainted with it. At the base of this fountain is the rather quaint device of a female figure with a stream of pure water gushing from both the founts, whence the young of the genus derives its nourishment—probably intended to indicate the readiness of the city to supply the wants of her children.

In the crypt of the cathedral itself, which is gorgeous, with marbles and precious stones to an extent scarcely equalled by any in Europe, is a singular manifestation of superstition, consisting in a large number of casts and models of the female breast in wax and plaster, suspended around a favorite altar to the virgin mother as votive offerings from women who have passed safely through the perils of child-birth.

A few hours' ride from Naples along the opposite shore of the bay from Vesuvius, and through the ancient tunnel, or grotto as it is styled, of Posilippo, brings the traveller to the town of Pozzuoli, the Puteoli at which St. Paul terminated his perilous voyage; and here are found the ruins of the temple of Serapis, one of the most interesting and remarkable relics in all Italy. It possesses two points of scientific interest; first, as indicating in an unmistakable manner and with great precision the alterations in the surface level along the coast of the bay from volcanic action; and secondly, as being the site of mineral springs. The tablets on which the records of this first remarkable phenomenon have been inscribed, are the three beautiful columns of Cippolino marble, which still stand by the site of the altar in the centre of the building, and the tops of which, jutting above ground in a palace garden, first led to the excavation of the ruin.

For the first twelve feet above the pavement they are quite smooth; above this point, for a space of nine feet or more, this surface has been bored into and honey-combed by a species of shell-fish which still exists in the waters of the neighboring bay, their shells being found at the bottoms of the holes; above here again is a zone, which indicates that the surface has been worn by the action of the waves, while the remaining portion merely indicates exposure to the weather. The naturalists and antiquarians of Naples, who have given this matter the most careful study many years past, consider that, in order to the production of such considerable results by these little animals, the columns must have been submerged for nearly three hundred years. The pro-

tection of the lower portion from their attacks, they account for by supposing that previously to the sinking of the site of the temple they were covered to this height by ashes and lava, from the eruption of the volcano of Solfaterra, which lies immediately behind the temple, and which is known to have been in action at the close of the twelfth century.

At present, the floor is again slowly sinking; for while fifty years ago it was perfectly dry in calm weather, it is now covered to the depth of 12 to 15 inches with salt water, so that a narrow brick causeway has been built in order to enable visitors to reach the site of the altar in the centre.

The second point of scientific and especially of medical interest, is the mineral springs which they contain, and which have been built in for use, as baths. There are three of them—two cold, and one hot; and there is little doubt that they have their source in the afore-mentioned nearly extinct volcano, a small part of which is, in fact, still emitting a stream of vapor from the mouth of a small cavern with very considerable force, and on approaching it very closely a lurid tint may be seen in the rushing steam, which plainly indicates reflected fires below. The constituents of the different springs do not differ materially. Analysis determines them to consist of the carbonates, sulphates, and chlorohydrates of the alkalies, with carbonate of iron, carbonate of soda being in great excess.

The hot spring, of which the temperature varies from 103 to 110° F., is the only one which is employed remedially to any extent, and its reputation in the treatment internally of dyspepsia, gout, &c., and externally of rheumatism and diseases of the skin, is very considerable. Pliny, whose uncle, the naturalist, it may be remembered was killed by the same eruption which destroyed Pompeii, in consequence of approaching too near in a galley in order to assist the flying citizens as well as to observe more carefully the phenomena of the eruption, describes the springs as on the north side of the Crater of Solfaterra, which still exists under their ancient name of Fontes Leucogei, from the white albuminous deposit which they leave upon evaporation. They are of boiling heat, contain principally the sulphates of alumina and lime, with sulphureted hydrogen, this latter constituent impregnating the air with that good "old particular" smell for a considerable distance around. In Pliny's time it was used for diseases of the eye, but the Lazzaroni of Modern Naples resort to it in numbers for the cure of diseases of the skin. In fact, as might be supposed in a neighborhood where the entire crust is underlaid at no great depth by

fires of molten stone, (indeed, in the Crater of Solfaterra there is a point where, if a heavy stone be dropped on the ground, it resounds as when the top of a hollow cask is struck,) and where, consequently, these subterranean laboratories have formed immense deposits of the salts; mineral springs, both hot and cold, abound in every direction. If we follow along the coast after a short detour, to visit the Lake of Avernus, now stripped of all its horrors, although the pebbles of pumices floating along its shores still give it a little of the preternatural, and pass the Lucrine Lake, whose oysters that jolly epicure, Horace, has made immortal, while even the elegant and refined Cicero did not disdain to speak a word in their praise, (though having made a trial of them, I can say with perfect confidence that it was never the good fortune of either of these gentlemen to have a fat bivalve from the waters of the Chesapeake glide soothingly over his palate,) we come to a number of ruins of considerable extent and beauty, which, although called temples, are generally considered by antiquarians to have been baths, and the idea would seem to be supported by the fact that a mineral spring at present bubbles up in one of the chambers.

Farther on are baths known as the *Bagni di Tritoli*, a name which they are supposed to owe to their former reputation in the cure of the tertian type of the intermittent. Climbing the side of a hill close by, we enter a narrow mouth, a chamber in its side, filled with warm vapor, from whence a passage is seen running in towards its centre. I penetrated this narrow way for a short distance, but the heat and density of the vapor soon made respiration so difficult that I was obliged to beat a hasty retreat to the open air. It terminates in several large deep wells of hot water, and, with other similar ones, constitutes the celebrated vapor baths of Nero, of which the satirist, Martial, says:

“What worse than Nero?

What better than his baths?”

High praise, if he mean that the virtue of the one were proportionate to the vice of the other. They have been in use at different times, even as late as the seventeenth century, for the treatment of chronic rheumatism.

The City of Naples is very rich in hospitals, having, it is said, as many as sixty institutions for the relief of suffering and cure of disease. It is very certain that no city has greater need of them. The only one which I visited was the “*Casa Santa degl’ Incurabili*,” or Hospital for Incurables, although it did not appear to me to be confined to this class of patients. It is of ancient date, having been

founded more than three centuries ago, and more recent benefactions have made it extremely wealthy. Its affairs are managed by a President and Board of Governors, appointed, as is every official, public or private, in Naples, by the King. It is an enormous institution, capable of containing 2,000 persons, and its capacities often tested. But a more ill-managed, wretchedly arranged, and disgustingly dirty establishment, I never visited. I was conducted into and shown all over it without a word from any official to the contrary, but by a little beggar boy whom I picked up in the street to show me the way to it. Its wards are of immense length, exceeding those of La Charité, in Paris, and cross each other at right angles in the centre, thus virtually converting two wards into one, and placing at least 200 patients in precisely the same atmosphere, with very poor arrangements for ventilation. This is especially true of the syphilitic wards, which are very extensive, (in fact one of the synonyms of syphilis is "Mal de Naples," or "Naples evil,") and situated almost entirely below the surface of the ground, the light and air entering only at the top of the low windows. The floors are of brick, and instead of being scrupulously waxed like the tiles of the Paris hospitals, look as if the virtues of a broom even, were unknown to them. In many places they have sunk into hollows which make convenient receptacles for the dirt which the attendants are too lazy to remove.

The state of the children's wards was especially disgusting, filthy water and urine actually standing about in pools that looked semi-stagnant. The basement wards of Bellevue in their palmiest days never possessed such horrors for the nose as this entire establishment was redolent of. Phthisis, which is here considered as contagious, is treated in separate wards. There is likewise a separate ward, to which, until within a few years, patients who were seen to be near their end were sent to die in each other's company. This outrageous practice seems at present to have been abolished, but I was enabled to discover the ward which had been so appropriated, by the inscription over its door, "Blessed are the dead who die in the Lord!" It will interest all good Catholics to know that whatever the physical condition of the inmates may be, the spiritual wants are not neglected, there being a confessional in every ward. There is a small Museum of pathological preparations attached to the hospital, which I must not neglect to mention, if only for the sake of stating the fact that its *custode* refused "buon mano," it being the only case that I met with in Italy.

The School of Medicine here takes rank after that of Florence among the Italian schools; but I was unable to learn anything of its

condition, or of the practice of the hospital, save that the barbarous method of treatment of Tinea Capitis, by "Calotte," (evulsion of the hair by means of plasters of pitch or some other strongly adhesive substance,) is still in vogue there. A few notes on the Pontine marshes and medical matters in the imperial city I must reserve for another letter.

BENJAMIN LEE, M.D.

Report of Cases occurring in Bellevue Hospital, N. Y. By J. M. FAR-
RINGTON, M.D., House Surgeon.

Fistula in Ano.

CASE I.—J. D., a Scotchman, æt. 47, a carpenter, of good constitution but of intemperate habits, was admitted to the Hospital Nov. 5th. He stated that eight years previous an abscess formed to the left of the anus, which was opened. An opening had remained at this point ever since, and by it were discharged mucus, pus and flatus, but no feculent matter. Below this opening, at the distance of an inch and a half, was a second one, with which it communicated. Careful and thorough examination failed to discover an internal opening to the fistula, although it was believed to exist, from the fact of the escape of flatus from the external opening.

The general health of the patient was good; no cough, bowels regular, and appetite good. On the 21st Dr. Wood operated, by making the fistula complete and cutting it out into the rectum. The parts were dressed daily with dossils of lint, the wound filled finely by granulation and cicatrization, and the patient was discharged cured on the 22d of December.

CASE II.—A. F., a native of Scotland, æt. 30, a stone-cutter by occupation, of good constitution and of healthy family, was admitted to the hospital January 20th. He presented an anæmic appearance, and stated that he had been suffering from intermittent fever, though he had had no attack during the five weeks prior to his admission. He had a fistula opening externally on the left side, and about an inch from the anus, and communicating with the rectum at about the same distance above. He had suffered from external hæmorrhoids for more than two years. This fistula began to form about six weeks prior to admission; the hæmorrhoidal tumors came down at that time, and were replaced by the application of ice; soon after which an abscess formed, which opened spontaneously at the site of the fistula. He had no cough, and, as previously stated, no hereditary tendency to

phthisis. On the 23d Dr. Wood operated in the usual manner, the dressings were applied, he went on doing well, but on the fifth day after the operation the patient eloped, and nothing further was ever learned of his case.

CASE III.—R. H., æt. 35, a native of Ireland, a clerk, was admitted to the hospital February 22d. He was pale and feeble, and presented the appearance of one in an advanced stage of phthisis. He had a complete fistula in ano, opening externally on the right side of the anus, and internally about two inches up the rectum. His father died of consumption at the age of 54; his mother, aged 84, was still living. He had lost no brothers or sisters from phthisis. Two years before his admission he had an attack of hæmoptysis; he coughed up a large amount of blood, and was confined to his room for ten weeks, the sanguineous expectoration continued during the greater part of his illness. He had, at that time, nocturnal sweats. It is probable that his illness was a severe attack of pneumonia. He recovered entirely from its effects, the cough and the night sweats left him, and he had had none of the former since; but the night sweats came on again about three weeks prior to his admission, and were still very depressing in their effects. He had suffered from both internal and external hæmorrhoids for the last fifteen years, but during the past four years they had been particularly troublesome. The discharge from those within the rectum had been copious and bloody. He had taken many remedies and used stringent enemata, and they were much better than they had been, and did not require any further treatment. For the previous two years he had enjoyed good health, excepting the annoyance given him by the hæmorrhoids. Examination of his chest revealed no evidences of disease. Six weeks before admission an abscess formed on the right side of the anus, which opened spontaneously at the end of a month.

In consequence of his debility and colliquative sweats he was put upon the use of tonics, viz., cod-liver oil, iodide of iron, and vegetable bitters. Extra diet was also ordered. His improvement was gradual but marked. His appetite soon became better, the colliquative sweats left him, his color and general appearance showed a marked favorable change. On the 3d of April Dr. S. Smith operated, by laying open the neck of the fistula into the rectum. The patient went on doing well until the 19th, when he asked for his discharge, the wound at this time being nearly closed, and his general health good.

CASE IV.—M. McE., an Irishman, æt. 37, a laborer, of intemperate habits, came into the hospital on the 18th of March. He stated

that in September a large abscess formed on the left side of the rectum, which, at the end of four weeks, opened spontaneously, and discharged a large amount of matter. It continued to discharge for several days, when it closed, but in a few days reopened, and had continued open and discharging ever since. On examination, there was found an extensive solution of continuity, having the appearance of the walls of a large abscess that had been laid open. It was on the left side of the fissure of the nates, parallel with it, and three inches in length. The upper portion of the wound communicated with an extensive cavity just beneath the integument, from which a smaller sinus extended upward. The fistula was believed to be incomplete, as, on careful and repeated examinations, no communication with the rectum could be discovered. The patient gave none of the rational signs, and auscultation failed to detect any physical evidences of tubercular deposit in the lungs. On the 3d of April Dr. S. Smith operated, laying the sinus open into the rectum. The wound was dressed with pledgets of lint, but as there was such an extensive surface to be filled by granulation, and as the patient has a poor constitution, the process of reparation has been very tedious. Stimulating applications, such as creosote lotion and iodine, have been applied to the granulations with good effect. He still (July, 1858,) remains in the hospital, though the wound is now nearly closed.

CASE V.—J. G., a native of Scotland, a stone-cutter, of good constitution and temperate habits, with no hereditary tendencies to disease traceable, was admitted to the hospital April 1st, for fistula in ano.

In December an abscess formed on the right side of the anus, which was opened; a fistula was the result, which was cut on the 5th of March by a Dispensary physician. On admission the wound was not healed, and a fistula was found communicating with it, which was cut on the 7th of April. The healing process was very slow in this case; the discharge from the wound subsequently burrowed beneath the integument of the perineum, and the sac thus formed was laid open by a bistoury on the 3d of July. The wound is now doing well, and bids fair to heal without further interference.

Remarks.—The management of a case of fistula in ano at this hospital is usually as follows: Should the patient be suffering from advanced phthisis, no operation is ever resorted to; but if the disease is incipient, the rule with Dr. Wood is to operate, and then by a seton or issue establish for a time a drain elsewhere. If the patient be feeble or cachectic, the operation is deferred until by constitutional treatment the strength and reparative power of the patient is restored.

The evening previous to the day for the operation, a large dose of castor oil is administered, and its operation is followed by a copious enema of tepid water. The contents of the bowel having been thus thoroughly evacuated, the operation is performed by introducing a large wooden director into the rectum, and a silver one into and through the fistula until it meets the first. Then a curved, sharp-pointed bistoury is passed through the fistula in the track of the silver director until it reaches the wooden one, when the silver one is withdrawn. The bistoury is then held firmly, and made to cut either through the intervening tissue while the wooden director is fixed, or else both director and bistoury are withdrawn together, and thus the fistula is laid open. After the operation the wound is filled with pledgets of dry lint until the flooding is arrested, after which it is dressed daily by lint laid in lightly, so as to cause it to granulate from the bottom of the incision outward. Opium is given sufficiently to keep the bowels in a quiescent condition for several days subsequent to the operation.

Case of Ulceration of the Rectum followed by Pelvic Abscess and extensive Peritonitis—death.

J. H., æt. 40, a native of Ireland, a laborer, of good health but of slightly intemperate habits, was admitted to the hospital March 26th, 1858. He complained of tenderness about the rectum, and said that his disease was piles. On examination, no hæmorrhoids could be seen, but on introducing the anal speculum, extensive but superficial ulceration of the mucous coat of the anterior wall of the rectum was found. He never had any illness since he was a child, or none within the last twenty years. Previous to that time he had on two occasions suffered from a fever, which was of a mild form and of short duration. He never contracted syphilis nor suffered from dysentery, and never passed any blood per rectum that he was aware of, and never used an enema.

For many years past his bowels had been alternately constipated and relaxed. After going for two or three days without a stool, the bowels would become very loose and remain so for about a week; then again constipated, and so on alternately. He had been employed for the past seven years in washing bottles at a brewery. He often found it, he said, a cold business. About three weeks prior to his admission he for the first time felt tenderness at the fundamen-
t. He did not feel it again until eight days before coming to the hospital, when, while at

stool, he found that the rectum was tender, and, to him, apparently contracted in its calibre. This tenderness and supposed contraction continued until the date of his admission. The morning before coming to the hospital he found that he could not void his urine, but before evening the difficulty had passed.

The ulcerated surface of the rectum was touched lightly with lunar caustic, and $\frac{1}{4}$ of a pint of water containing in solution 10 grains of nitrate of silver was ordered to be injected into the rectum twice a day. This was continued without inconvenience until the morning of the 30th, when, immediately after its use, he was attacked with a severe pain, deep beneath the pubic arch. Thinking that the pain might be due to the action of the nitrat. argent, some salt water was thrown up the rectum with a syringe, but it failed to alleviate the pain; it, however, gradually subsided, and then the injection was ordered to be used but once a day. The second time it was used a similar pain came on, and the injections were then discontinued. This was on the 1st of April. The patient wore an anxious expression, and was peculiar in his manner from the date of his admission.

Attention was now called to the abdomen, which he said was painful to the touch. His abdomen was naturally small and tense. Turpentine stupes were ordered, which relieved the pain, but a redness of the integument remained, which at first was supposed to be due to the turpentine. The scrotum became œdematous, and punctures were made to give exit to the serum. The redness of the abdomen increased, and it was soon noticed to be an erysipelatous inflammation; the tissues crepitated under pressure. Dr. Stephen Smith, visiting surgeon, now saw the case, and noticing the circumscribed tumor over the pubis, the œdema, redness and tenderness extending from below upward; the low condition of the patient, and his inability to micturate at times, thought it more than probable that ulceration and perforation of the bladder had occurred, and that this erysipelatous inflammation was the result of infiltration of urine. Incisions were made through the integument of the abdomen, but with little effect in relieving the œdema. A lotion of acetate of lead and opium was applied. The urine was mostly voided without the use of a catheter, though it was necessary to relieve him occasionally by its use. The urine contained no albumen, but a slight amount of what appeared to be pus with blood, was on one occasion noticed to pass from the urethra. When he was micturating, a few drops of fluid escaped per rectum, the quantity of which continued to increase until his death; it was supposed to be urine, though none of it was examined carefully.

His condition was gradually growing worse and worse. His countenance became more and more anxious and cadaveric in appearance. The scrotum began to slough; he complained but little of pain. At the time that it was presumed that perforation of the bladder had occurred, a catheter was placed in the bladder and allowed to remain 36 hours, when it was found that he could void his urine without its use. He continued to sink, and became unconscious on the 11th; from that date he lay in articulo mortis until early on the morning of the 13th, when he died.

Post-mortem examination 14 hours after death.—On opening the abdomen the whole of the abdominal muscles were found to be infiltrated with and dissected up and apart by a very dirty and intensely ill-odored pus. The amount of pus in the abdominal muscles and pelvis was at least 20 ounces. No pus was found in the peritoneal cavity, but there was evidence of extensive peritonitis. The peritoneum for the whole extent of the lower half of the abdomen was firmly adherent to the intestines by recently organized lymph. The pelvic viscera were removed *en masse*. An ulcer was found at the lower part of the rectum; perforating it near the verge of the anus, still higher, was a second large ulceration, extending through the anterior wall of the rectum, and communicating with a large abscess which lay between the rectum and the posterior and left side of the bladder, and extended up to the bottom of the peritoneal cul de sac that lies between the rectum and bladder. The abscess was found nearly empty; its contents had probably been evacuated with the stools of the patient during life. The bladder was found to be whole, and its perfect condition was demonstrated by filling it with water per urethra by a large anal syringe. The pus found about the abdominal muscles was probably the result of severe inflammation and consequent disintegration of these muscles, this inflammation having probably been excited by the extensive ulceration and abscess below as well as the attack of erysipelas in front. The specimen is now in the Museum of Bellevue Hospital.

REVIEWS AND BIBLIOGRAPHY.

Transactions of the Medical Society of the State of New York, for 1858.
Albany: 1858.

The present volume is in many respects superior to its predecessors. In size, it is an increase upon last year's, giving nearly 600 pages of

reading matter exclusive of the abstract of the proceedings. The ordinary paper covers are replaced by cloth ones, so that the bound volume is ready to be placed permanently in our libraries. This is a great improvement, which cannot fail to be appreciated by all who care to preserve the Transactions of such Societies.

With the exception of the lithographs of the deceased members, whose portraits, badly executed, do anything but adorn the volume, the illustrations are excellent.

There are several papers included in these transactions, which render the volume extremely valuable, and deserve a more extended notice than we can give them.

The annual address of the President, Dr. Augustus Willard, is the first in order. The theme is "air, exercise, and sunlight." This is timely, for at the present moment, the hygienic treatment of disease is attracting more attention than ever before, and as a prophylactic, the popular mind, moved by the influence of the profession, is learning to regard exercise and pure air as indispensable. Our youths are being trained in gymnasiums, and physical education comprises a good share of the instruction in many of our schools; while our colleges, even, catching the spirit of the day, are adopting the manly sports as a part of the students' duties, and are encouraging the boat club and such like amusements as conducive to good order, rather than regarding them as avenues to turbulence and disorder.

This is as it should be, and yet exercise alone is not sufficient; for, as Dr. Willard remarks, "to have its proper influence upon the health and strength of the body, it should be taken in the open air and in the sunlight."

The latter we believe to be far more important than has been heretofore supposed, and we are glad to see it so ably presented as it is in this paper. The analogy between plants and animals, in reference to the action of sunlight upon them, cannot be doubted; for the striking effects of long-continued absence of sunlight, as exhibited upon Dr. Kane and his companions of the Arctic expedition, fully sustains it. The influence of light upon animals has recently been investigated by M. Beclard, a synopsis of whose experiments will be found in the last number of the MONTHLY.

Light has its vivifying influence, which cannot be supplied artificially. The same amount of exercise taken in the open air and in the broad sunlight would be sufficient to meet the demands of health, which taken within doors would be inadequate. This is very forcibly put by Dr. Willard, who says: "The exercise may even be

active, but the chemical influence of artificial light, if any it has, can never by any process be made to supply the place of the sun's chemical rays, and the chemical constitution of the body cannot, of course, under such circumstances, be perfect." As regards the relative value of sunlight, Dr. Willard adds: "We would not give any undue consequence to sunlight; we simply consider it as one of the great and important necessities of the human system; pure air and active exercise being, as we have already said, the other two. Direct sunlight is at least equal in importance to pure air and exercise as an agent in the preservation of health, and for the prevention and cure of disease. In calculating the chances of life and health, there is the same propriety for taking it into consideration as the other two conditions, and the fact of free exposure to the sun, or confinement to shade, is equal in importance to the consideration of the amount, kind, and degree of labor or exercise to be used, or the quality of air to be respired." "The triad is inseparable."

The second, third, and fourth papers are biographical sketches of deceased members of the Society.

The fifth paper is on Anæsthesia, by Dr. Peter Van Buren, of New York. This is a brief resumé of the history of etherization, of chloroform, of amylene, and the different anæsthetics. With the majority of practitioners, preference is given by the author to chloroform; and while considering the subject of anæsthesia in its different relations, it is chloroform that is generally mentioned.

The ill effects of chloroform are attributed in a great measure to its impurity, and a direct influence in decreasing the mortality attendant upon surgical operations is awarded to it. Its use is lauded in obstetric practice, and in various spasmodic and nervous affections.

"To insure success in securing anæsthesia, the following directions as to the condition of the patient, and the mode of administering the vapor, have been found serviceable.

"1st. The patient, as far as possible, should be kept in a state of perfect quietude, and freedom from mental excitement, and if possible in a recumbent position. All talking and all questioning should be avoided.

"2nd. To ensure speedy success, the vapor should be allowed to pass into the lungs both by the mouth and the nostrils.

"3rd. No surgical operation of any magnitude 'should be commenced until complete insensibility has taken place.' (Simpson)."

Several tests to ascertain the purity of chloroform are given, and reference made to the valuable paper upon the subject, by Dr. Squibb,

read before the N. Y. Academy of Medicine, which appeared in a previous number of the MONTHLY, (Vol. VIII, No. 1.)

Among the means recommended to be used when anæsthesia has been carried too far, the author cites artificial respiration; the opening of the external jugular vein, in connection with artificial respiration, as recommended by Dr. Snow, and electricity, as proposed by Dr. Abeille, of Corsica.

In this connection we may add, that almost all recent writers upon the subject of anæsthesia speak more of the pulse and less of the respiration, when describing the process of administering chloroform and other anæsthetic agents, or enumerating the measures to be used to avoid the extreme effects of this powerful agent.

In the new American Cyclopædia, under article Anæsthesia, great caution is given as regards the condition of the pulse, while the state of the respiration is not mentioned; whereas all practical operators agree in recommending that the respiration should be especially watched in connection with the pulse. The respiration will often cease some time before the pulse gives any indication of the poisonous action of the agent, in which event resuscitation is more difficult. If respiration has ceased, it is dangerous to delay the means of resuscitation, although the pulse may still be regarded as good.

The next paper, "on the use of Amylene as an anæsthetic," is by Dr. John G. Orton, and is laudatory of the new anæsthetic, the use of which, however, is now mostly discontinued—the mortal effects attending it in the hands of its discoverer, Dr. Snow, together with its volatility and its uncertain action, depriving the profession of that confidence which is necessary for the popularization of such an important agent. A History of the Discovery of Amylene, and experiments performed with it, will be found in No. 2, Vol. VIII, of the MONTHLY.

There are two papers on cerebro-spinal meningitis, one presented by Dr. D. G. Thomas, by authority of the Oneida County Medical Society, and the other by Dr. J. V. Kendall, of Clay, Onondaga County. Both of them are valuable contributions to the literature of this fearful disease, before which medical treatment is so often powerless. The latter paper seems to us especially to be commended for its straightforward narration of what the author has seen, for the clear, though condensed reports of cases, and for the judicious remarks upon the treatment to which patients should be submitted when affected with this disease. A careful perusal of it will be profitable to any one who has opportunity for it.

The report of the committee on the comparative use of ergot and

the forceps in labor, will be found in full in the last number of the MONTHLY, and we therefore do not dwell upon it, farther than to say that its doctrines ought to receive the careful consideration of all who are engaged in the practice of midwifery.

The ninth paper is a report of a "case of ovariotomy," by H. S. West, M.D., of Binghamton. The opinion is expressed in it, that "the patient owes her life to the opium treatment, thoroughly followed up and watched." The preparation used was the sulphate of morphine.

We must pass by the tenth paper on "puerperal fever," by N. Potter, M.D., Hallsville, N. Y., because our pages have been largely occupied with this subject and must still continue to be. The paper is, however, none the less interesting.

The next report, though short, is in some respects unique, as it is of a case of fracture of the cervical vertebræ, in which the patient lived twenty days after the accident. The patient fell through a hatchway, striking on the back of his neck. Consciousness remained after the fall; there was pain and stiffness in the neck, loss of power to move the fingers, with some difficulty in moving the arms, loss of sensation and motion of the legs, and of control of the bladder. The case was regarded as one of concussion of the spinal cord, and under the treatment improvement was quite marked up to the twentieth day after the accident. There was no pain in or stiffness of the neck; the ability to move the arms and wrists had returned; the sensibility of the legs was restored, and the bowels and bladder resumed their natural functions. His attendants undertook to move him on the twentieth day, when he complained that they had "wrenched his neck, and that he felt blind." In two hours he died. On examination, there was found to be fracture of the fifth and sixth cervical vertebræ, the former being broken through its laminæ on both sides, the fragment being driven back so as to encroach upon the cord, and the sixth being fractured in the same way, but without displacement of the fragment. There was also a portion broken off from the body of the fifth vertebra. No effort at union of the fractures was observable.

The statistics of obstetric practice, by Dr. A. Van Dyck, are of value, but we must pass them, as is also true of the next paper, entitled "congestive fever," by T. H. Squire. The titles of—pernicious fever, typhus petechialis, spotted fever, cerebro-spinal meningitis, brain fever, are put down as synonyms of the first, but this passes our logic. The paper is, however, of value as a record of cases, which are well reported, though they allow reason to doubt if two or three different diseases are not confounded in them as well as in the title of the paper.

The two papers next following are by Prof. Alden March, of Albany, the first being "upon osseous union of intra-capsular fracture of the neck of the femur." It is very well illustrated, the drawings being neat and accurate. The possibility of union after fracture of the femur within the capsule is still a mooted point, and these specimens are brought forward by Dr. March to aid in settling the question. Dr. March is quite confident that his specimens support him in advocating the doctrine of complete fracture within the capsular ligament, and union by ossific deposit, without impaction. These consist of a specimen procured in London, to which no history is attached, and of one obtained from an old negro who died in the poor-house of Albany, and had been for years peculiarly lame. In early life, he is reported by those who knew him, to have fallen from a shed, and afterwards to have been treated by a skillful surgeon for fracture of the thigh. A cast of another specimen is also alluded to by Dr. March. Now it is very clear that the first thing to be done is, to determine the extent to which the capsule of the joint is attached to the neck of the femur upon its superior surface; and Dr. March, in differing from Wilson as to its extending to the middle of the neck of the femur, undoubtedly makes the possibility of the occurrence of this fracture much greater. The result of our own observation is, that the line of attachment of the capsular ligament is not an absolutely fixed one, but varies in different subjects; and that a fracture occurring in two cases at the same absolute distance from the extremity of the femur, might be in one entirely within the capsule, while in the other it would be so only partially. This has always seemed to us to be one of the grounds of the difference of opinion upon this subject among surgeons, and on this account it is absolutely necessary to procure both femurs of the subject, for the sound one will show the line of attachment without the confusion necessarily produced by the fracture and the reparative processes which follow it.

The next, a case of calculus, required an operation for its removal. The patient was a woman, aged eighty-seven years, and the operation was performed by engaging the stone in the urethra, and then, as it could not pass, a straight probe-pointed bistoury was introduced by the operator flatwise, on the upper and outer face of the calculus, for about an inch and a half; the edge turned up, and he then cut upwards and outwards towards the groin. "The anterior extremity of the urethra was divided from a third to half an inch, which was amply sufficient to enable me to bring the calculus forward, and to extract it by the aid of the finger and grooved staff." As the result of the operation "it

has neither left a fistulous opening in the neck of the bladder, as one mode of operating on the female is liable to, nor incontinence of urine, as has often been the result of dilating the urethra, or of opening it in a downward direction."

The illustration of the case is very elegant, and it is by the same artist as that of the preceding paper, John E. Gavit, of Albany.

A letter from Dr. Cleveland, Health Officer of the City of Brooklyn, to Dr. C. S. J. Goodrich, relative to the mortality of that city, forms the subject of the next article, and is followed by a short paper "on the Registration of Births, Marriages and Deaths," by Franklin B. Hough, M.D. It is very important that some method of registration should be used, both for legal and statistical purposes, and the official position which Dr. Hough has occupied in preparing the Census of the State, has made him acquainted with the difficulties of the subject. This paper, therefore, is valuable in containing the suggestions of a competent person upon the method to be pursued in carrying out a proper and uniform registration.

Dr. C. V. Barnett has contributed a valuable paper on "Poisoning by Arsenic, from Absorption." It is a report of twenty-one cases observed by himself, wherein the peculiar poisonous effects of arsenic were the result of external application and absorption of this drug; all but four were relieved by the continued exhibition of the hydrated peroxide of iron. In nearly all the cases the "symptoms were dryness of the mouth and throat, great distress at the stomach, with more or less vomiting, uniform pain and distress in both upper and lower extremities, in most of them paralysis to a greater or less extent, always commencing with pricking and numbness in the ends of the fingers and toes, generally tender and irritable condition of the bowels, in most instances accompanied with diarrhoea and inflammation of their mucous coat; a universally small and quick pulse, and a general inability to retain food of any kind on the stomach." In no instance was ptyalism observed, nor any cutaneous eruption, nor any affection of the hair or nails.

The next paper is a very interesting report of a singular "case of accidental Nigrities, occurring in a female at the age of sixteen," by W. H. Gardiner, M.D. The patient had presented a fair complexion up to the age of fourteen, about which time she commenced to menstruate, and nearly simultaneously dark brown spots were first observed, but attracted no particular attention till two years afterward. At sixteen years of age she was taken sick, and at that time she began to grow darker in complexion, till she became in the space of two months

distinctly black. Her hair was black, coarse, and straight. She presented no other evidences of disease. When seen by Dr. Gardiner, she was in her twentieth year, and a few months after was suddenly taken sick and died. No post-mortem was made.

The annual address delivered before the Albany County Medical Society, on "Human Longevity," by its President, Dr. Samuel H. Freeman, is communicated by the Society, and is still another speaking evidence, fortified by statistics, of the value of a rigid observance of the sanitary laws of Nature for the enjoyment of health and the prolongation of our days.

It was a very good resolution adopted by the Society at the preceding session, that hereafter the Vice President of the Society should deliver an address at some period during the session. Dr. Thomas C. Brinsmade, of Troy, this year held that office, and performed this duty in a very able and interesting manner. For twenty-one years Dr. B. has been in the constant habit of making a record of *all* his cases, whether mild or grave, and of noting their results. This has been done daily, not allowing any accumulation to occur, for this seriously threatens the success of any such undertaking. With an earnest determination to be regular in noting cases every day, he declares it to be quite easy to keep such a record—without it, it is impossible. The register used by Dr. Brinsmade is ruled for the following headings, and in the order in which they are given, viz.: date, name, age, sex, occupation, color, nativity, habits, (intemperate or not,) disease, cured, duration, remarks.

This allows a rapid jotting down of facts chiefly desired in ordinary cases, for *all* are to be registered, and at the same time the interesting features of important cases can be put on record separately.

About 270 pages of the volume are occupied by these tables, which are a mine to be quarried by those who are investigating disease statistically. They deserve to be imitated by every man in practice, whether he has five or fifty patients every day. The fact demonstrated by them—to wit, that such a record is practicable, is useful, and leads to valuable results—is the great and impressive lesson from them, and may we all do likewise.

Among the remarks made upon various diseases, we find it stated that of the twelve cases of intermittent fever in 1857, eight were treated by nux vomica given in pills, each of which contained two grains of powdered nux vomica and one grain of extract of gentian. One pill every third or sixth hour, according to the length of the intermission, is usually sufficient to interrupt the paroxysms, after which one may be

taken three or four times a day for two or three weeks, to prevent a relapse.

There still remain two papers of value, one from the King's County Society "on the Statutes of the State of New York regulating the practice of physic and surgery—the rights, duties and immunities of physicians—and their relation to the Medical Societies of the counties in which they reside;" and the other the report by Dr. Bontecou, of Troy, of a case of "enormous diffused aneurism of the axilla from sub-cutaneous rupture of the artery." The sub-clavian artery was tied, but there were subsequent hæmorrhages twenty different times, though finally the patient recovered. The case is interesting, and we shall endeavor to find room to reproduce it in the MONTHLY.

Plates are also given of Dr. Sim's Uterine Elevator, and Dr. Armsby's instrument for passing a seton through the hernial sac and inguinal canal, with the design of producing a radical cure of the hernia.

We have thus sketched as briefly as possible the contents of this volume, omitting to mention many good things which our readers will find in it. With all the value of the papers contained in this volume, with all its good plates, with all the effort made by the society to put itself creditably before the profession at large, and with all the expense incurred by the State in issuing it, the volume goes out in an important respect a shame and disgrace to all connected with it. We refer to its *saturation* with typographical errors. No other word is sufficient. It is not only full of them, it is saturated with them; and this is not much relieved by the page of errata which is added at the end of the volume. We understand that the State presses will not wait for proofs to be sent to authors, as should be done, and therefore especial pains ought to be taken with the proof readings. For the sake of the society and the whole profession, we beg some medical gentleman at Albany to take the trouble to read the proofs of subsequent volumes, even if he has to volunteer his services, and does not receive any pecuniary recompense. * *

The New American Cyclopædia; a Popular Dictionary of General Knowledge. Edited by GEORGE RIPLEY and CHARLES A. DANA. Volume II, Araktsheeff—Beale. New York: D. Appleton & Co. 1858. Pp. 776.

We have expressed our satisfaction at the appearance of the first volume of this publication, in a previous number of the MONTHLY, and

it is a cause of gratification that the second is entitled fully to everything then said. Indeed it is a cause for honest pride to an American that the undertaking promises so happy a combination of useful and reliable knowledge, and a style both popular and attractive. Encyclopædias are generally avoided by the young and unprofessional, on account of the intolerably prosy style which is employed by *Dryasdust* in the preparation of their contents. It is something of importance when such a style is replaced by one light, interesting and attractive.

The articles generally show accuracy, and bear with them the air of reliability. It is not possible to control so large a body of collaborators, so as to ensure *absolute* reliability, but it strikes us that this has been done better here than with some contemporary publications of a similar character. The *London Athenæum*, in a late review of the first volume, is pleased to select the errors and misstatements in that volume as characteristic marks of the publication. We have no desire to play the part of scavenger, in detecting what necessarily must be present in any publication of this kind, but feel really thankful that the people have opened up to them so little of error and so much of accurate information. Occasionally we notice a desire to attach the name of an American to some process which has been merely *employed* by him, instead of invented, giving a sort of importance in this way not deserved; but this, we suppose, springs from the friendship of the author of the article, rather than from a desire to do injustice.

We shall look forward to the appearance of the other volumes of this series with much interest, and hope that they may present the same attractions as the two already issued.

L. H. S.

Elements of Inorganic Chemistry, including the Applications of the Science in the Arts. By THOMAS GRAHAM, F.R.S., L. & E., late Prof. of Chemistry in University College, London. Edited by HENRY WATTS, B.A., F.C.S., and R. BRIDGES, M.D. Second American, from second revised and enlarged London edition. Blanchard & Lea: 1858. Pp. 852.

The appearance of the first American edition of Graham's Chemistry created an epoch in the history of text-books on this beautiful science. The style was interesting, devoid of verbiage, the scientific details were reliable and trustworthy, and the illustrations novel and well-suited. The edition was soon exhausted, when the American publishers commenced the re-publication of a second edition. But, 430 pages being published in 1852, nothing had been done towards

the completion of this edition during the last six years. Many other treatises on the science have been, from a sort of necessity, employed by teachers in their classes, when Graham's was their decided preference. It is a pleasant thing to find that, at length, the favorite textbook, clad in new attire, is put within the reach of the student. The value of the latter half—422 pages—has been much enhanced by the careful labor of Mr. Watts, the English editor. He was induced to take hold of the book, as the duties of the author, in his present position as Master of the English Mint, prevented him from undertaking the task. Mr. Watts has added a supplement, bringing the subjects treated of in the volume up to the present condition of the science. This contains the subjects of "the Mechanical Equivalent of Heat; the Relations between the Chemical and Magnetic Effects of the Electric Current, and the Reduction of its Force to absolute Mechanical Measure; also the Measurement of the Chemical Action of Light." Gerhardt's Unitary System is employed for the exhibition of the constitution and classification of chemical compounds. "The last portion of the supplement contains the most recently discovered facts relating to the non-metallic elements, and the metals of the alkalies and earths; a prominent place being assigned to the *allotropic* modifications of certain elements, viz., boron, silicon, sulphur, selenium, phosphorus, and to the methods of obtaining the alkali and earth metals in the free state."

We have not time nor space to go into any full examination of the manner in which these subjects are treated, considering that we are doing all our readers can desire, when we announce the *appearance* of the completed volume of the second edition, with such valuable additions. It is as though we had announced the arrival from a foreign country of an old friend, *much* improved by travel, and the additions made to his wardrobe in distant lands. Under such circumstances commendation is not wanted; the mere announcement of the arrival speaks volumes.

L. H. S.

A Manual of Psychological Medicine, containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity, with an Appendix of Cases. By JOHN CHARLES BUCKNILL, M.D., Lond., &c., and by DANIEL H. TUKE, M.D., &c. 8vo, pp. 536. Philadelphia: Blanchard and Lea.

It is not often that a work makes its appearance which is so completely adapted to fill a void in professional literature as the one before

us. Here we have carefully and conscientiously brought together all the particulars of insanity which it is necessary as well as desirable that the general practitioner should be acquainted with, and which, for their attainment, have heretofore required the diligent study of a large number of books not usually found in miscellaneous professional libraries. The book has long been needed; but we do not propose to make a review of it, neither shall we cull any particularly striking passages. Our advice to every one is, to get a copy. It should be included in the list of books which the youngest practitioner provides himself with when he puts out his name to the public gaze; and there is no practitioner so old in the harness that he will not find himself benefited by a careful study of it.

Of Nature and Art in the Cure of Disease. By SIR JOHN FORBES, M.D., D.C.L., (Oxon,) F.R.S., &c. From the second London Edition. New York: S. S. & W. Wood. 1858.

The author of this volume is well known as the former editor of the "Foreign British and Medical Review," at one time dividing the patronage of the profession of Great Britain with the Medico-Chirurgical Review, with which it has since been incorporated.

The ability of the author as editor and writer, his high social position, and his long career as a physician, add great weight to the opinions contained in this volume.

Its tenor is well expressed in the following passage, taken from the introduction: "It is thought that the general views here given will enable such junior practitioners as may study them, to apply them, of their own accord, to the improvement of their treatment of diseases; by strengthening their confidence in Nature's powers, and by mitigating, in their hands, the evils of polypharmacy and of that meddlesome and perturbative practice still so predominant in this country."

The scope of this work, which is by no means complete, but highly suggestive, cannot be indicated better than by quoting the titles of the various chapters.

The 1st and 2nd are Introductory to the General Subject; the 3rd is entitled General Notions of Diseases; 4th, Of the Causes, Mode of Production, and Nature of Diseases; 5th, Of the Course or Progress of Disease; 6th, Of the Natural Terminations of Diseases, and the Modes in which they take place; 7th, Evidence in favor of the Curability of Diseases by Nature; 8th, Of the Existence and General Na-

ture of the Medical Art; 9th, Instruments of the Medical Art; 10th, of the Mode of Action of the Instruments of the Medical Art—Direct and Specific Action; 11th, Of the Mode of Action of the Instruments of the Medical Art—Indirect or Vicarious Action; 12th, General Estimate of the Powers of the Medical Art.

The author believes in medication to a certain extent, but is skeptical as to its beneficial results in acute diseases. He trusts greatly to the beneficent action of Nature, and recommends that what he calls the natural history of disease should be more closely studied. Then it will be learned that many diseases, if left alone, will result in cure; whereas, when perturbed by active, indiscriminate treatment, they lose their distinctive characteristics, and frequently end seriously. In chronic diseases, on the contrary, he trusts greatly to the action of medicines.

This book will find no favor with those who are blind followers of active therapeutics in disease, and who regard any departure from the traditions of the schools, and a too strong confidence in the powers of Nature, as a leaning to the dogmas of homœopathy; but to those who from experience have become "aware of the great imperfections of their art, and of its inadequacy to fulfill, in a satisfactory manner, much that it professes and undertakes to accomplish," the suggestions and philosophy found in its pages will increase their confidence in the unlimited resources of our art, and make them still greater students, more earnest searchers for the truths yet to be developed. We like the book—we believe its doctrines to a great extent, and therefore we cordially recommend it.

D.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

[Reported for the MONTHLY by E. LEE JONES, M.D., Secretary.]

Regular Meeting, Jan. 27, 1858. DR. E. R. PEASLEE, *President*.

Dr. G. T. Elliot exhibited a lung removed from a child 3 months old. When first seen, 10 days before its death, the child presented the evidences of syphilitic cachexia. He had no history of the case, the child seeming to sink and die from mere exhaustion. On examining the body after death, taking into consideration the cachexia, anx

ious expression of the face which he had noticed a few days before its death, &c., he expected to have found that change in the liver described by M. Gubler.

Autopsy.—He found the liver somewhat enlarged and congested. There was no jaundice. The gall bladder did not contain much fluid, and what it did contain was quite light in color. On careful examination into its appearance, there was none of that hardness, none of that thin discharge that could be squeezed out from the organ—in fact, none of the appearances said by him to exist in cases of this sort. Dr. Dalton was kind enough to examine a section under the microscope, and he found the cells to be normal; there was no preponderance of the fibrous or plastic element.

Dr. G. T. Elliot also presented a specimen, showing the results of *endo-metritis*, perforation of the posterior wall of the uterus. It is a specimen of interest, involving, as it has done, a good deal of responsibility, and resulting unfortunately. This was taken from a young woman, *ætat* 18, who had arrived at full term. She fell in labor on the 16th of the month, in Bellevue Hospital, at about 7 P.M. Everything seemed to go on favorably during the day. Dr. Hardaway, House Physician, detected a cranial presentation; he recognized the anterior fontanelle towards the right side of the pelvis, and also that the sagittal suture was parallel to the transverse diameter of the brim; the posterior fontanelle he did not make out. The intensity of the heart sounds was to the left side. He also recognized during the day that there was some diminution in the capacity of the brim of the pelvis. 9 P.M. the membranes broke. During the night she obtained some rest by chloroform, but after the effects passed off the pains returned, and she suffered somewhat from them; she had also vomited. About 9½ the following morning he was summoned to see her. The first thing that struck him when he arrived was the change in expression; instead of an expression of perfect health, and one entirely free from anxiety, it was wholly changed into an intensely anxious look. She vomited considerably. Pulse 120. Abdomen somewhat tender to the touch. Examination enabled him to recognize the diminution in the antero-posterior diameter of the brim; heat of vagina normal, discharges were perfectly normal and satisfactory. Head was now engaged in the brim, but was movable. The pains were not forcible, but powerful enough for the head in that position. Under these circumstances he deemed it advisable that she be delivered without loss of time. In the consultation that followed there was a difference of opinion, first as to the degree of deformity of the pelvis; next

that the failure in the expulsive efforts was the cause of delay; the consultants urged the administration of ergot—it was then towards 11 o'clock; under the circumstances he acquiesced, and some 12 grs. were given. She was again seen in 3 hours' time; it was found that the ergot produced some effect, but not in such a degree as in other cases when the same quantity was taken. On examination the only change found was in rendering the head less movable. There was no obstacle urged against immediate delivery; the foetal heart was still beating, the vagina was a little hotter, the character of the discharge as good as before, her expression was worse; vomiting, though not now diminished, did not exist in any degree to cause alarm. He delivered with the forceps without any difficulty or delay. The child was a male, and weighed 6 pounds. The uterus contracted well, and there was no trouble with the placenta. This was about 3 P.M. Sunday. After the operation she was placed in a private ward, and Dr. Hardaway gave directions for the administration of morphine in sufficient quantities to insure sleep. It happened that, instead of getting to sleep, the vomiting increased; the nurse by some mistake did not give the requisite quantity, and she died in 36 hours afterwards. After the operation the pulse became rapid, secretions excessive, attended with a gulping up of food, which could not be checked by the administration of pellets of ice, neither by morphine in all its forms of administration by mouth, anus, endermically, &c.

Autopsy.—The thoracic viscera presented nothing worthy of note; liver soft and fatty. There was a large amount of fluid in the peritoneum. Though there were no evidences of general peritonitis, there were flakes of lymph in the neighborhood of the uterus. The uterus being examined, showed no signs of peritonitis. Upon the posterior wall of the uterus, exactly in the mesial line, near the os, was a perforation about the size of a vest button hole. Its appearance shows it to be no laceration. This perforation is just in that situation corresponding to the promontory of the sacrum. The pelvis is under size; there is a diminution of the antero-posterior diameter of the brim, about an inch; the projection of the sacrum is accordingly quite sharp, and the head of the child pressed this posterior wall of the uterus against this sharp edge of bone. On laying open the uterus on the mesial line, we could readily see the exact spot where this perforation had been made from within; it was opened somewhat obliquely along the walls of the uterus. The uterine sinuses presented, in their interior, portions of coagulated blood, which is looked upon as an evidence of inflammation. The appearance of this perforation from within was such as might be

expected from the appearances without; below it, and extending to the same line, there was also some solution of continuity, not extending completely through the wall; it is in direct line with the perforation and the point where the head would rest. The portion that rested upon the symphysis pubis had a similar lesion, but not to the same extent. On careful examination by Dr. Clark, of these parts, he came to the conclusion that these ulcerations were not the result of laceration, but sloughing. Careful observation by the eye convinced him of that point. The appearances upon the foetal head correspond to those noticed elsewhere.

Microscopical Examination.—On microscopical examination by Dr. Clark, there were displayed evidences of endo-metritis, pus not perfectly well formed, presenting itself in quantity in the discharges from the internal walls of the uterus. Carefully opening the sinuses with clean instruments, there were no evidences to the naked eye of pus being present, but the microscope discovered an abundance; pus was also found under the broad ligaments, and could be squeezed out of a section made across the fallopian tubes. Upon the child's head, after birth, could be seen the direction of the pressure exerted upon it. The left parietal, near the frontal bone, was deeply depressed at the point that rested on the promontory of the sacrum. To guard against any undue pressure from the blades, he placed a towel between them. The child died on the 19th. After death, the head was examined, and underneath this depression there was found blood effused between the dura-mater and bone; also an ounce or more under the lobe of the cerebrum.

Dr. Elliot remarked, that this case was one of a great deal of interest, and he thinks it illustrates very strongly the dangers of delay; that it enforces a rule that he has endeavored to prove—the advisability to terminate the labor as rapidly as possible. He submitted the question to the Society, whether the change in the countenance, the commencement of vomiting, &c., did not indicate the commencement of metritis? Whether the time will not come when it shall be looked upon by all obstetricians as entirely wrong to allow a woman to reach such a point before art be allowed to interfere?

Dr. Clark.—In relation to the green discharges in the uterus, he was reminded by Dr. Elliot that it was an evidence of death of the foetus. The discharge in this instance was between the membranes and the wall of the uterus, and could be squeezed from thence by the fingers. He thought it to be owing to inflammation of the uterus before the child is delivered.

Dr. Elliot remarked that Dr. Clark had misunderstood him in that

respect. He only stated the fact as the opinion of some, and not as an acknowledged fact among obstetricians; that in this day of auscultation, it would not by any means be admitted in the category of facts.

Dr. Gardner referred to a case of labor which he was called to see a week or two since. The head presented in the first position, and could just be reached by the finger; and there it remained for some three days, the os being firm and undilatable. He delivered the child at the end of that time with a long forceps through an os, the diameter of which was not over $2\frac{1}{4}$ inches. The child lived five hours. The mother subsequently did perfectly well. On the forehead of the child the frontal bone was depressed to the distance of one-eighth of an inch, which corresponded with the projection of the sacrum.

Dr. Barker presented a *Polypus* of the *Uterus*, which he had removed that day by excision from a patient, æt. 38, and mother of 3 children; the youngest is 6 years old. Since 3 years ago she has suffered from hæmorrhage at her menstrual period; within the last few months it has been at times considerable, and, as a consequence, she has been within the few weeks past very much blanched and anæmic. Within the last few weeks there was also a good deal of purulent discharge from the vagina, of a very offensive odor. On examination the os was patulous, through which a small portion of the tumor protruded; the main portion of the tumor was in the uterus. He introduced a sound, passed around it, and found it to be pedunculated; the pedicle was about $1\frac{1}{4}$ inches in diameter. Here is a point of ulceration and decomposition of the tissues, which accounts for the offensive discharge. The amount of blood lost in the operation did not exceed 3i.

Dr. Dalton presented a specimen of a product of *Conception*, removed from a woman who considered herself 9 months pregnant. It is a very good specimen of moles. It is an ovoid-shaped body, more or less red, and of a gelatinous consistency. He presumed that they were in all cases the products of conception. The mass is lined with a smooth membrane, the chorion, and is made up almost wholly of blood that has been effused. It is seen, as is frequently the case, that the upper and lower portions of the tumor differ from each other; the upper portion is thick, rounded, and ovoid in shape, while the lower portion is narrow, bloodless, and compressed. He presumed that this occurs in consequence of the ovum being pressed out, and the other portion retained in the cavity of the cervix for two or three hours, until abortion is complete. This fact also explains why the ovum sometimes is not found in abortion; but still, notwithstanding the ab-

sence of the ovum, so long as there is a decidua or chorion to be recognized, it is nevertheless a true product of conception.

Dr. Cock read the history of a case of inflammation of the *Mastoid Cells*, extending to the membranes of the brain.

Christian Lakowski, æt. 35, Prussian sailor, admitted Jan. 20, 1858.

Jan. 21st.—His account is, that he was taken with backache, pain in his limbs, fever, and a severe throbbing pain in his left ear, for which he can assign no cause.

Eight days ago the ear began to discharge, and for the last two days he has spit a small quantity of blood, without cough. His pain has continued unabated from the first, with attacks of delirium for several nights past. He has had an emetic, a blister behind his ear, and some purgative medicine before admission.

His skin is hot, face flushed, pulse 100; was 120 when admitted, full and strong. Respiration frequent, tongue heavily coated. He complains now of headache exclusively on the left side, and very severe, with soreness of the muscles of the left side of the neck. There is a purulent discharge from the ear of that side. He has double vision and muscæ volitantes; pupils natural, equal and responsible. He does not wink the left eye with the other, and cannot close it. The mouth is drawn to the right, and he cannot pucker the left side to whistle. Protrudes his tongue straight, and there is no loss of power on either side. He first noticed this condition of the face a week ago. Was ordered C.C. to the temples; calomel grs. x., and R spts. æt. nit. 3i., tr. aconite gtt. iii. every two hours last evening.

Jan. 22.—Yesterday afternoon his pulse came down to 76. Was ordered to take his aconite every three hours, and have leeches to the temples. This morning his pulse is 80, and softer. Slept but little during the night, but had no delirium. Face less flushed. Can close the eye better. Air escapes through the ear when he blows.

P. M.—Vomiting. Ordered blisters behind the ear; calomel, grs. xii., divided into three powders; to take one every three hours.

Jan. 23.—Tongue cleaner; bowels moved freely; pulse 86; full, rather hard, and slightly irregular. Has some subsultus; grits his teeth; says he sees better; no more vomiting.

P. M.—Muttering delirium and has to be secured in bed; continually smacking his lips; eyes fixed on vacancy; urine clear; sp. gr. 1,026; albuminous, viz., heat and nitric acid both throw down a white precipitate in moderate quantity, but a large excess of the acid dissolves its own deposit. Aconite stopped; ordered calomel, gr. every hour.

Jan. 24.—Right eye very much congested and the cornea hazy; semi-comatose; respiration 48 and somewhat labored; evacuations involuntary; pulse 150. His pulse gradually became more frequent and the respiration stertorous through the day. Died at 6 P. M. Autopsy 18 hours after death. The membranes of the brain were very much congested. The base of the cerebellum and pons varolii were covered with a thick deposit of lymph, which extended somewhat over the upper surface of the cerebellum, and was quite thick upon the spinal cord, as far down as the first dorsal vertebra, which was as far as traced.

The deposit was alike on both sides of the cerebellum; nor could any direct connection be traced between it and the ear, although pus escaped from the internal meatus, and pus was found in the mastoid cells. There was no perceptible disease of the kidneys.

Dr. Sayre presented a specimen of *Osteo Sarcoma* of the upper jaw, which first made its appearance some twelve weeks since. The patient, a gentleman 52 years old, of strong, robust constitution, and no hereditary predisposition, suffered from what he supposed was toothache for four days. The tooth was then extracted; a small portion of root was broken off and left behind.

The pain still continuing, he returned to the dentist, who, in his efforts to remove the remaining portion of the tooth, perforated the antrum. The pain continued to increase, and in three weeks after the extraction of the tooth a tumor made its appearance. The pain and tumor increasing, he was requested to see him ten days since; its malignant character was at once recognized. The tumor crowded upon the nostril of that side, so as to occlude it completely, elevated the eye, changing its axis in relation to the other, and at the same time protruding it considerably. On consultation with Drs. Mott and Buck, an operation was advised. The patient consented, and the left sup. maxillary bone was exsected on last Saturday.

A portion of the tumor behind had to be taken away by fragments. To-day the dressings were removed, and union had taken place throughout the external excision, which extended from the inner canthus of the eye to just within the angle of the mouth. There was no hæmorrhage from the operation. Microscopical examination showed it to be cancerous in its character.

Dr. Bauer presented a specimen, removed by amputation from a lad æt. 16, who entered the L. I. Hospital on the 4th of this month, on account of ankylosis of the knee, following inflammation of the joint. The leg was at an angle of 30°, with considerable contraction

of the flexor muscles. This lad was rather anæmic and feeble looking, and though he had acquired a good height, was somewhat backward in manly development. He requested the removal of his deformity, and accordingly an operation was performed for straightening the limb by dividing the fibrous insertion of the fascia lata, together with the flexors, using very little force, which broke as he thought all the old adhesions. The limb was secured in a straight position, and the patient did perfectly well for three days, when febrile excitement was developed; the knee-joint did not inflame as is usual. On examining the wounds it was noticed that sloughing had commenced. The system was placed upon a supporting treatment. On the ninth day after the operation he sustained the loss of some 12 or 13 ounces of blood. The sloughing went on. On 17th day the line of demarkation had pretty well formed, and granulations began to spring up; the question of amputation came up, and upon consultation it was thought best. He amputated the thigh on Friday last. On examining the limb afterwards, it presented a most unique result; instead of breaking up the ankylosis, he had separated the epiphyses from the bone. Out of 125 operations upon children of 6 months old and upwards, where these epiphyses would be easily separated, he had not met with a like result. The epiphyses are seen attached to the bones of the leg, and separated from the thigh; and between the external condyle and the femur there is a space, caused probably by suppuration, into which the finger could be introduced; the surfaces of the bones are denuded of cartilage, the other condyle which is in connection with the tibia has a slight degree of mobility, even the crucial ligaments are in existence. The patient is doing tolerably, though his recovery is yet doubtful. He was surprised to find that such a small amount of force which he used would produce this result, when fifty times this force on younger patients was unattended with any such result.

Regular Meeting, February 10th, 1858.

Dr. Krakowitzer exhibited for *Dr. A. L. Voss* a specimen of *Aortic Aneurism*. D——, a German, 39 years of age, a very stout and muscular man, of remarkably white complexion, a machinist engaged in turning metal, has been temperate and in good health up to his 28th year, when he was taken with inflammatory rheumatism; how long or how severely he was sick, and whether he then had cardiac trouble, cannot be made out now; but from that time to his death he was affected frequently with rheumatic pains in different parts of his body. Last summer exposing himself while in heavy perspiration to a cool draft of air, he first felt pain in his chest and cough, for which no regular

medical treatment was sought. Three weeks ago a sharp pain in his left arm from the shoulder downwards, combined with an alarming degree of dyspnœa, was brought on suddenly by muscular exertion while going to bed. Henceforth any sudden muscular exertion, an abrupt change in the posture of the body, would bring on the same attack. Such fits lasting from half an hour to three hours, were relieved only by the most absolute rest, and by sitting with the upper part of his body bent forward. A very copious expectoration of white frothy sputa during the attack afforded no relief whatever.

On the 11th of January the patient applied at the German Dispensary for relief, more on account of the pains in his arm than for his other affliction. The diagnosis in the journal of that Institution, by Dr. E. Schilling, was "Aneurism of the Aorta Ascendens, hypertrophy of the heart, and insufficiency of the aortic valves." On the evening of the 22nd of January he had again one of his attacks, but more violent than usual. Dr. Voss found the man sitting in the cold hall, under the most violent symptoms of dyspnœa, begging for air, his skin cold and clammy, the face cyanotic, veins of the neck very prominent, but not pulsating, his pulse small and frequent, alike on both wrists. The humid rhonchus in the trachea and bronchi so loud as not to permit the perception of any other respiratory sounds. All means to relieve the lungs of the venous congestion, or to restore the pulmonary circulation, failed; the man died with acute œdema of the lungs.

Autopsy.—About 15 hours after death, examination of the chest only permitted.

In each pleural cavity about two pints of clear serum. Both lungs adhering pretty extensively to the costal pleura by false ligaments, œdematous, congested with dark blood, in every other respect healthy.

The lower portion of the mediastinum adhering to the pericardium, the cavity of the pericardium entirely obliterated by close adhesion of its two layers. The heart measuring in its transverse diameter $7\frac{6}{8}$ inches, in its longitudinal diameter 8 inches, weighing with pericardium and a very small portion of trachea and œsophagus 27 ounces. All the cavities of the heart widened, mostly so the left ventricle. The muscular wall of the left ventricle $\frac{1}{2}$ inch thick, that of the right rather thinner than normal; a layer of fat from one-sixth to one-half inch thick covers the anterior surface of the heart, more so the right ventricle. The cavities of the heart filled with dark jelly-like blood, *no* fibrinous coagula.

The tricuspid and mitral valves sufficient, the free edges and up-

per surfaces of the mitral valve thickened by exudations in various stages of organization and retrograde metamorphosis. The aortic valves thickened partly by infiltration with a jelly-like clear substance, showing in some spots the change to atheromatous masses.

Immediately above the free margins of the aortic valves the aorta was dilated into a spheroid sac, showing, when opened, on its left side a slit giving easy access to two fingers, and forming the entrance to a pouch, holding by measurement a little more than two fluid ounces. The posterior edge of the chink projects like a spur, thereby forming a sort of insufficient valve to the pouch, which was situated exactly between the left auricle and the pulmonary artery. The inner surface of the aorta and the pouch showed the atheromatous process in all its stages, from the first clear transparent infiltration to the degeneration of the exudations into fatty and calcareous masses. These masses were richest at the valvular projection at the entrance into the aneurismal pouch.

The pulmonary artery and its branches were dilated, adhering with their posterior surface to the anterior wall of the pouch of the aorta; on this spot the interior surface of the pulmonary artery was also studded with atheromatous plaques.

The two anterior semi-lunar valves of the pulmonary artery stretched, as it were, so as to compensate for the inefficiency of the posterior one, whose free margin was considerably shortened by adhesions to the inner surface of the artery.

Dr. J. L. Campbell showed the *larynx, trachea, and part of the bronchial tubes* of a boy who died of membranous croup.

J. T., aged 5 years, a boy of scrofulous habit, was attacked during the early morning of the 13th ultimo with croup. I saw him at 1 P. M. He was sitting up and seemed quite comfortable. I observed, however, that his inspiration was a little prolonged, and produced a slightly stridulous sound on application of the ear to the trachea. I found also extensive bronchitis. Obtaining a good view of the fauces, I could discover no deposit of lymph. A blister was applied over the stomach and an emetic given. I was unfortunately prevented from seeing him again, as was my purpose. The treatment gave only temporary relief. The dyspnœa returned, and the child died in 40 hours after my visit, from suffocation, a considerable quantity of detached lymph having lodged in the larynx and fauces. Large quantities of the same material I learned were expelled by the action of the emetic given several hours before death.

Post-mortem thirty hours after death. Present—Drs. Smith and

Sewall. The epiglottis on its laryngeal surface was coated with lymph, the same deposit lining the entire mucous membrane of the larynx and trachea, lessening the calibre of the latter, as will be seen, to a very considerable degree.

The first division of the bronchi also coated in a similar way, the membrane being only less complete in its formation, but sufficiently so to form a complete cast of the tubes. Cutting into the substance of the lungs, a yellowish-gray material of semi-fluid consistency oozed from the divided extremities of the bronchi, which was probably the same exudation at an earlier stage. The pericardium contained a table-spoonful of serum; other organs of chest and abdomen, as far as observed, healthy.

The specimen is interesting in its bearing on the subject of tracheotomy, it being evident that, except at a very early period, in such a case as this, the operation would be ineffectual.

Dr. Finnell presented several specimens; the first was an instance of membranous croup. The specimen consisted of the larynx and trachea taken from a little boy of same age as in the case presented by *Dr. Campbell*—5 years and 2 or 3 months. The account given by the mother was, that up to half an hour before his death he seemed perfectly well, when he was seized with difficult respiration and seemed to be suffocating, and while they were deciding upon calling a medical gentleman the child died.

Post-mortem examination disclosed this condition of the larynx: Here is a patch of false membrane localized to this spot; the part of the trachea below is free from any exudation, as are the bronchi throughout. It seemed to have been an acute localized inflammation in the larynx which gave rise to this deposit, which completely blocked up the passage. It differed from the one presented by *Dr. Campbell* both in the situation and extent of the membrane. In the latter case tracheotomy would have been of no avail; in the other, probably it would have saved his life.

Dr. Clark stated that he had a single remark to make in reference to the expediency of performing tracheotomy in the case of *Dr. Finnell*. It did not appear to him that it would have been attended with any better result than in the ordinary run of cases, for this reason: The child had been sick only a few hours, and it was fair to infer that the inflammation which produced the exudation was of recent date. He thought that it was an acknowledged fact, that false membrane in croup commences to be formed at the upper portion of the tube, and so descends; that the membrane at the upper end is always maturer

than that below. He thought that the child's life might have been prolonged and a sudden death warded off; but would be of no use when it extended farther down.

Dr. Peaslee referred to another point of importance in connection with the case; the sudden development of the symptoms go to show that inflammation may be very suddenly developed, and also the exudation which accompanies it. He did not think the lesions could be present without the symptoms.

Dr. Buck thought it was difficult to conceive the formation of false membrane in so short a time. We all know how very insidious is this disease; how the intervals between the paroxysms are so complete as to deceive not only the friends, but even the physician himself. He thought it probable that these symptoms had been going on for some time unnoticed, inasmuch as the symptoms of croup at first are not alarming, and to many who do not expect it, it is thought to be merely a cold.

Dr. Clark remarked that there was a class of cases in which tracheotomy could be performed with benefit if the state of things were known during life. He had made two or three post-mortems of cases of croup in which there was a complete detachment of the false membrane from all the inferior portions of the tubes, where it had become folded upon itself, and by which doubling the larynx was very much obstructed. He thought, under circumstances of a similar nature where the membrane was being spontaneously removed, that tracheotomy would be of decided benefit. Several remarking that the appearance of false membrane on the fauces was regarded as a very important element in the diagnosis, he asked why this membrane was not found in that situation in these two cases? He would like to know how much this could be relied upon.

Dr. Clark stated that he had a definite opinion in regard to that matter. Ever since he saw the fact mentioned by Hodgkins in his "Treatise on the diseases of serous and mucous membrane," and long before *Dr. Ware* had made any statement with regard to it, he had been in the habit of looking for that appearance in the throat, and he had only the recollection of a very few cases where something of the membrane could not be seen. In one of these instances nothing could have been seen from before the velum palati, but the posterior surface was completely covered over. He thought, as a very general rule, when false membrane existed in the larynx, there were patches recognizable either upon the velum pendulum palati or tonsils.

Dr. Buck thought that the converse of that proposition was not al-

ways true; that the evidence of membrane in the throat did not prove it to be in larynx also, unless there were developed some laryngeal symptoms. This last fall, he was called to see two children sick with diphtheritic disease. A third had died of the same disease that day, and was then unburied. He saw them early in the afternoon, and found that there was an exudation upon the tonsils of the most unequivocal character, but there were as yet no laryngeal symptoms, no cough, no dispnoea, no change in the voice other than a certain thickening from swelling of the tonsils and parts surrounding. We were very anxious in regard to this case, and apprehensive that the disease would extend to the larynx. The next morning the physician in attendance visited the case early; there was then a freedom from laryngeal symptoms, but at his visit, which was later, they began to show themselves; they increased the danger of the disease, though it was kept in check, and both recovered. One, however, immediately afterwards was attacked with acute pneumonia, and then died. In these instances it was very evident that we could mark the extension of the diseased action to the larynx by the symptoms that presented themselves.

Dr. Clark asked if it was not a law of croup that when false membrane is to form that it makes its first appearance in the throat? He could not have many opportunities of judging, because the mothers rarely send for a physician at that early period of the disease. He considered that the cases cited by *Dr. Buck* were in accordance with the usual phenomena of croup.

Dr. Buck thought it was true that, when a disease was prevailing in a neighborhood, there will be cases that show the membrane only in the fauces, without extending into the larynx. He visited a patient some years ago at Orange; the physician said he had a number of such cases from 7 to 17 or 18 years of age, several of which proved fatal. He said in some of his cases there was no laryngeal complication, the fauces alone being affected. *Dr. Crane*, of Brooklyn, had a most remarkable case of diphtheritic disease, affecting the nasal passages, fauces, &c.; also affecting the general system very seriously, producing a train of nervous disorders that lasted for weeks and months afterwards. This was unattended by laryngeal complication. I could well understand such a case.

Dr. Clark.—In the diphtheritic constitution, wherever an inflammation attacks a mucous membrane or an abraded surface occurs, the granular membrane is formed. Lately, there has been prevailing that constitution at the Nursery on Randall's Island. *Dr. Reeves* brought me an eye affected with conjunctivitis, the eye covered and eyelids

lined with granular membrane. He added, that there was many such cases there.

Dr. Peaslee remarked that inflammation commencing in any part of the air passages is liable to stop anywhere. The law is, that it travels from above downward; in one case we see it only in the larynx, others in trachea, and others still in the bronchial tubes; these different states may depend upon different diatheses of the patients. In regard to this very interesting case, it seems to him that we have not proved that mere inflammation without exudation (if there be any such thing, which he questions,) produces death. In children the peculiarity of croup is, that the exudation becomes organized and forms false membrane. Now, in this case, inflammation alone could not have killed the child; it was the exudation that killed the child, and it being poured out suddenly, caused death in a proportionately quick time. The cases referred to by *Dr. Clark* in relation to the benefit to be derived from tracheotomy in connection with the three autopsies which he made where the membrane was peeling off, show that if the system be supported long enough, till the membrane is separated, that the child would get well. It goes to show that if the child would live long enough the membrane would always be detached, either in fragments or in a mass, in which latter case the very detachment might hasten death. This view of the case is entirely against heroic treatment.

Dr. Henschel referred to the case of a child who had a brother die a fortnight ago from croup, who was taken with the same symptoms, æt. 8 or 9 years. The physician saw the case; although all the signs of croup were present, no patches in the fauces could be discovered. He saw the child three or four days afterwards, when it brought up a large patch of membrane, and kept doing so for three or four days. The child is now doing very well; the voice has returned with a good deal of fulness. He saw it for the last time, as a patient, to-day. He gave very large doses of calomel, which he has seen in several instances prove highly beneficial.

Dr. Clark believed such cases to be the exception and not the rule.

SELECTIONS.

Successful Operation for the Removal of the Superior Maxillary and Malar Bones. By DIXIE CROSBY, M.D., Prof. of Surgery, &c., in Dartmouth College.

As the removal of the maxillary and malar bones is one of the infrequent operations in surgery, perhaps the incidents in the following case may prove interesting to some of your readers.

The patient was a Mr. Ira Clifford, of Warren, N. H., a farmer, 55 years of age, and had previously been healthy. There was, however, a scrofulous taint in the family, and during the year 1854 it manifested itself. The cervical glands became enlarged, and the patient fell into a cachectic condition. An appropriate constitutional treatment was resorted to, and in a few months the enlarged glands returned to their original size, and the patient regained his normal tone. Aside from this, no hereditary disease was known to have existed in the family. In the summer of 1855, Mr. Clifford began to experience difficulty in masticating his food on the right side. The teeth, also, upon this side gradually became discolored. In the fall of 1856 he had a tooth extracted, and ever afterward there was a discharge from the right nostril. This consisted of pus, and the greater part of the time was extremely foetid. In August, 1857, the second molar was extracted, and this operation was followed by a good deal of hæmorrhage. In the month of September following, he first consulted a physician, who removed two more of the teeth. In October, an opening was made through the alveolar process into the antrum. Through this opening there was a considerable discharge of pus up to the time of the operation. In November, the cheek began to enlarge toward the inner angle of the eye. Early in December, a profuse discharge occurred from the right nostril, and the canine tooth was drawn. January 26th, 1858, the antrum being much distended, and the cheek continuing to enlarge, an opening was made just beneath the eye, followed by a free discharge of pus. A probe passed in at this opening, made its way through the antrum, and reached the opening previously made through the alveolar. Meanwhile the patient was treated with iodide of potassium, and the antrum injected with a solution of the chloride of zinc.

February 24th, the patient came into the hands of Dr. A. G. French, an exceedingly intelligent young physician residing at Warren, who subsequently had charge of the case. To his assiduous care and skill is due much of the success which attended the operation. February 25th, Dr. French enlarged the opening upon the cheek, but advised the patient to have the diseased maxilla removed immediately. I was called in consultation with Drs. French and Stearns, and fully coincided with them as to the propriety of an operation. Some palliative measures were advised; but in a few days the patient became

impatient, and on the 5th of March the operation was performed. There were present at the operation, Dr. A. G. French, the attending physician; Dr. Peter L. Hoyt and Dr. A. B. Crosby. Messrs. Shaw, Fellows, Smith, Crosby and Whipple, medical students, were also present and assisted.

The patient being firmly secured in a chair facing a window, chloroform was exhibited until complete anæsthesia was induced. An incision was then made, commencing at the external angular process of the frontal bone, and terminating at the angle of the mouth. The incision was in the form of a curve, the convexity being backward. Another incision was now made, commencing at the internal angular process of the frontal bone, passing down the side of the nose and separating the ala, finally splitting the lip in the course of the philtrum. An incision was now made, one inch in length, commencing upon the malar bone and passing backward along the zygoma. The whole cheek was then dissected upward, detaching it from the bone, and turned up over the eye. A branch of the coronary artery, and one of the facial, were divided, but were readily controlled by pressure. The anterior wall of the antrum was found to be partially destroyed, apparently by caries. The orbital wall was in the same condition, and the remaining walls were much expanded. On dissecting up the cheek, several ounces of offensive matter escaped from the antrum, and for a time threatened to deluge the patient's mouth. The eye being gently separated from the external wall of the orbit, a pair of strong bone pliers were applied, so as to divide the articulation between the malar and frontal bones. The same instrument was employed to divide the zygoma. One blade was introduced into the nostril and the other into the orbit, and the intervening bone cut through. The middle incisor tooth of the right side was now extracted, and a very strong pair of the bone pliers cut through the alveolar and palate processes of the bone. The remaining points of attachment to the soft parts were easily separated by the knife, and the diseased mass was removed. From the fact that the orbital was partially broken down, portions of bone remained adherent. These were removed, until all the parts remaining were healthy. The operation occupied seventeen minutes. Dr. French and my son, Dr. A. B. Crosby, took charge of the dressing. Five twisted sutures were employed: two in the lip, one on the side of the nose, and two in the curved incision. This brought the cheek fully into position over some tow which had been introduced into the cavity. Several interrupted sutures were introduced, so as to coaptate the edges of the wounds throughout their whole extent. A simple water dressing was applied, and the patient removed to his bed. For the subsequent history of the case I am indebted to Dr. French, who was so kind as to keep a record of it.

" March 5th.—Three hours after the operation. Re-action is well established in the flap. The pulse is 90 in the minute, and of good tone. The hæmorrhage has been checked by injecting a solution of alum.

6th, 9 o'clock, A.M.—Patient rested well during the night. His

pulse is 85 in the minute. Have given him food and drink through a tube. The wounds have healed throughout their whole extent. Have dispensed with all medicine, simply enjoining quiet. 11 o'clock, P. M.—Pulse 100 in the minute. Have given him a laxative of rhubarb and castile soap. Have removed the tow from the mouth, and the discharge seems healthy.

7th, 5 o'clock, A.M.—Patient has not rested well during the night. Has a pulse of 60 in the minute; extremities cold, and a disposition to sink. Have resorted to friction, and administered brandy and quinine. 8 o'clock, A.M.—Pulse 70, and of sufficient tone.

8th, 9 o'clock, A.M.—Patient has slept well. Pulse 70. Have continued the stimulants and tonics.

9th.—Patient is doing well. Pulse 65, and of good tone. Have removed the middle suture on the cheek. The parotid gland is somewhat enlarged.

10th.—Patient continues improving. Have removed the remaining sutures, and applied adhesive strips and collodion. The discharge from the cavity is now moderate and healthy. Have given an enema to procure a movement of the bowels. Have ordered porter and quinine.

13th, 15th and 18th.—Everything has continued favorable, and the patient is constantly improving."

Sometime after this, I received a letter from Dr. French, saying that the wound over the zygoma had re-opened. I suggested there might be a spiculum of bone which had caused the mischief, and advised a thorough probing, and its removal, if found to be the cause. I received another letter, bearing date of May 3d, from which I make the following extract:

"Mr. Clifford came down to see me last Saturday, and feels first-rate; says he has no doubt but he should be able to walk four or five miles! Has a good appetite; rests well, and is free from any pain. The opening upon his face has closed up."

I have since learned that the patient is quite well, and the deformity much less than might have been expected. Judging from the appearance, I do not think the disease was cancerous in its character. I intended to have examined the morbid specimen under the microscope, but was prevented from doing so until it was spoiled. Considering the progress the disease had made before the operation, the result has been much more favorable than we had any right to expect.—*Boston Med. & Surg. Journal*.

Dartmouth College, Hanover, N.H., June, 1858.

Tubercular Phthisis; the Result of imperfect Cell Action. By R. E. HAUGHTON, M.D., Richmond, Ind.

I regard consumption as both a constitutional and local disease, the local disease being the result of the constitutional. Then the mode

of cure is to arrest the general disease by removing the causes. Impairment of the blood is the chief condition which gives rise to manifestation of symptoms and the means which restore it to a normal condition, and the system to such a condition as shall manufacture good blood, are the curative means. Fresh air, exercise, and good digestion and assimilation are among the important means. Drugging the stomach will never do this—an organ already frequently impaired by exercises of various kinds. Then why derange it still more? There may be times when a tonic will do much good if wisely selected, but the indiscriminate medication in this disease is an evil to be greatly deplored. In impairment of the stomach, pepsin may be introduced with a view of assisting digestion, as this article possesses the power, in combination with the acids of the gastric juice, of dissolving articles at a proper temperature out of the stomach. The experiments of Wasman* upon this subject are to the point. Next, the introduction of such food as can be easily digested and assimilated, and which contains the elements of repair in their best combination to suit the condition of the functions of absorption and assimilation. By this means we change the blood-mass, and oxygenation is perfecting the great work of the perfect assimilation of the chyle into blood. But again, if we fail because of the structural change in the lungs, or because digestion and assimilation are not performed, we can do more. I now propose *transfusion of blood* as affording a means of changing the blood-mass, thereby changing the conditions of the system, re-invigorating the brain, and sending out increased nervous energy, and promoting digestion and assimilation, and thereby placing the system in a condition to return to health and vigor. If we thus change the blood-mass, tubercle ceases to be deposited. When it ceases to be deposited, the great work of cure is partly accomplished, and then the removal of those already deposited, or rendering them inactive and latent, or producing absorption, completes the cure. If cavities have been formed, by supporting the general health in this way, these cavities will soon cicatrize, and a cure is the result. It is well known that tubercular depositions take place by successive crops, and softening in the same way, hence, arrest the deposit by changing the blood, and if softening of the first crop takes place, that is the end of it, no more to soften. And how many pass through several periods of softening, with the increasing irritation still added, till worn out by the continual destructive change, which thus takes place in the lungs. I do not know that tranfusion of the blood in consumption was ever thought of or recommended in the treatment of this disease, but I arrive at it from the pathology, which I regard as true, and it recommends itself because it is the *thing* the diseased system cannot do for itself, change its own blood, or manufacture it anew, because of the failure of the blood manufacturing powers of the economy. Iron is one of the elements of healthy blood, and this is deficient in all those cases, and which in transfusion is directly furnished in its proper relations, and can be thus appropriated to its proper use in the economy. So it is

* Carpenter's Physiology.

with the other elements thus furnished, and we have the very thing at once effected, which has so long failed to be done in any other way. Transfusion is successful in cases of hæmorrhage, where the system is exhausted and anæmiated, and why not be successful in other cases where the blood is diseased, and the cause of the *local disease*? Some would object to this, because the patient should not be subjected to such a process. The irritation is small compared with the irritation often kept up with drugs, from day to day, without any corresponding benefit. This plan or mode of treatment must give strength because from the blood are deposited all the tissues, and all the secretions are from the blood, and if this be a pure article, then must all the results flowing from it be good, "for it is written, 'the blood thereof is the life thereof.'"

Again, show me a patient whose system manufactures good blood, even if the lungs are diseased, and I will show you one who is not very likely to die of consumption. When the function of the lungs is interfered with, I know very well that the blood is not well aërated, and there is a tendency to deterioration of the blood, and if there is no effort at expansion, the deterioration will go on. For the mode of performing transfusion, the plan proposed by Ramsbotham, in his work on the Process of Parturition, page 333, is sufficient. The history of transfusion dates back to more ancient days, and afterwards fell into disuse, till the practice was again restored by Dr. Blundell,* in cases of dangerous and copious hæmorrhage, in lying-in women. The names of Hamilton, Davis, Velpeau, are referred to in reference to this subject; as also Denman, Leacock, and Lane. That transfusion is not circumscribed in its benefits to one form of trouble is quite certain; and that it has never been before tried or suggested in any case of scrofula or consumption that I am aware of, and it has quite as much to recommend it in those cases, as in those where it has been used, I am quite certain. The experiments upon which the doctrine of transfusion is founded were performed by Dr. Leacock, and made known in an inaugural thesis, published in Edinburgh in 1817, and afterwards the experiments were repeated and varied by Dr. Blundell. The experiments prove that healthy human blood is alone fit for the purposes of transfusion, and this is, of course, eminently true in the condition of the blood which obtains in consumption. But leaving *this* for the present, we have a few suggestions to make in reference to some of the other means which may be used beneficially in the treatment of cases of consumption. In place of cod-liver oil, I find that rich cream or very rich milk answers a much better purpose, from the fact that it does not nauseate the stomach, and contains the oil or fatty elements which are easily and beneficially appropriated to the uses of the system, without impairing digestion and assimilation. As a tonic, some preparation containing iron is evidently best suited to most cases of tubercular disease, and frequently improves the appetite and digestive power. I am treating a case at the present time, in which the Syrup Iod. Ferri. is most strikingly beneficial, a few

* (Physiological and Pathological Research, 1824.)

doses of which, in this case, improves the appetite when almost entirely deficient, and beef will be craved and apparently well digested. This preparation of iron, in another case of a child, where both scrofula, as manifested in glandular enlargements, and also a diseased condition of the lungs existed, acted like a charm in removing the morbid conditions present. Exercise in the open air every day, and rich diet, as cream, butter, and the gravy of beef and pork, was allowed *ad libitum*, and at the present time the child is fat and hearty, cough gone, emaciation gone, glandular enlargements gone, and the child bids fair for long life, as any child of its age. Of the various complications of consumption I have not spoken, and of some of the forms of disease which often precede it and lead to its development, when not arrested by treatment. These subjects are not spoken of in the previous papers, of which this is a part and the conclusion. Of these I may treat hereafter, and of the modes of treatment which may successfully counteract and cure after development of the disease. I shall not continue, at present, any views upon this subject, but ask for that part of treatment by transfusion in tubercular diseases a candid investigation of medical men, and for the pathology upon which it is based refer them to the November and January numbers of the *Medical Independent*, Detroit. There are corresponding evidences of the value of a similar treatment by the use of the blood of animals in the treatment of tubercular hæmorrhage; of the same in the exhaustive diseases of children, where it has been given as an internal remedial agent, subject to the process of assimilation. The authority in these cases is sufficient, and the evidence of benefit and cure well authenticated by the medical journals of foreign publication.—*Cincinnati Lancet and Observer*.

Removal of an Ovarian Tumor, in which the Ecraseur was used. By JOHN L. ATLEE, M.D., of Lancaster, Pa.

On the 29th of January, 1858, I was called to see Mrs. E. E., of this city, in consultation with Dr. James Rodgers. She was then in her sixty-first year; commenced menstruation at seventeen; married at the age of twenty-three, and had never conceived. Her menses continued until the age of fifty-two, with occasional slight intervening leucorrhœa, and had always been more or less painful, and somewhat profuse. On one occasion, about two years after her marriage, she had uterine hæmorrhage, which weakened her and kept her confined to bed for a few days. Soon after the cessation of the menses, she had an attack of erysipelatous inflammation of the face; since which time, until the winter of 1856-7, her health had been very good. Her husband died four years ago. Some time in January or February, 1857, she became troubled with flatulent distension, as she supposed, of the lower portion of the bowels, and a frequent inclination to pass urine, although the quantity discharged was trifling. She had also occasional pain on each side, just above the groins, which re-

sembled the pains of menstruation. On the 5th of August, finding her symptoms increase, she consulted Dr. Rodgers, who, upon examination, discovered a tumor occupying the whole lower portion of the abdomen, with evident fluctuation. A course of diuretic and hydragogue cathartic treatment, combined with mercurials, was instituted, and perseveringly carried out by him alone, and subsequently in consultation with a highly respectable and experienced physician, with no other effect than to debilitate the patient. The size of the abdomen gradually increased; and on two occasions Dr. Rodgers was of the opinion, from the severity of the pain, that peritoneal inflammation existed in the left iliac region. The patient now complained so much of the discomfort arising from the distension, that, on the 17th of December, her physicians removed eight pounds of a highly albuminous fluid by tapping. A tumor of considerable size remained, occupying the left hypogastric, iliac, and lumbar regions. The character of the disease being now understood, all active treatment was suspended, and the patient placed upon a more generous diet. The only medicine given was a mild saline aperient, to regulate the bowels. Four and a half weeks after the first tapping, a similar amount of fluid was drawn off by Dr. Rodgers. Two weeks after this I was requested to see her. I found the abdomen as large as at the full period of pregnancy. There was evident fluctuation over the whole of the right side of the abdomen, extending to the left hypochondriac and upper portion of the lumbar regions. A very hard tumor occupied the lower portion of the left lumbar and iliac regions, pressure over which occasioned severe pain. Upon examination, per vaginam, I found the neck of the uterus occupying a central position in the pelvis; the left side presenting a tumor without fluctuation. On the right side a tumor could be felt, covering the brim, with evident fluctuation when the tumor was percussed from above. I diagnosed a multilocular tumor of the left ovary. Owing to the great oppression and pain arising from the pressure of the cyst, we tapped her again on the 3d of February, less than three weeks from the last operation, and eight and a half pounds of fluid were removed, containing so much albumen that it coagulated perfectly by heat. This rapid filling of the cyst had caused great emaciation, and it was evident that, unless resort was had to the removal of the cyst, she could not long survive. Her pulse ranged from 90 to 100, and, occasionally, was above that; it was small and irritable, and quickened by mental emotion and exercise.

Three days after the last tapping a careful examination of the tumor was made, with reference to the practicability of an operation. The large remaining tumor, now that the abdomen was relaxed, could readily be moved to the opposite side; and inasmuch as the severe local pains, which existed when the abdomen was distended, were immediately relieved after tapping, I had reason to doubt the existence of much previous peritoneal inflammation, and consequent adhesion. After representing fairly and candidly all the dangers of the operation, in the presence of her attending physician and immediate friends, she was left to decide for herself—my opinion having been given that it

was practicable, and would be successful. At all events, should dangerous adhesions exist, the operation would be abandoned, and the wound closed; as had occurred to me in a previous case, with a favorable result. After various delays, and another tapping on the 3d of March, at which ten pounds of albuminous fluid were removed, she finally demanded the operation; being sensible, from the rapidity of the filling of the cyst, and her increasing debility and emaciation, that it could no longer be delayed. The day previous the bowels were freely evacuated, the patient restricted to cold water, and in the evening twenty drops of elixir of opium administered, to keep the bowels quiet. At midnight she took a second dose. Thirty drops were given on the following morning, the 23d of March, on which day, at noon, I proceeded to the operation, in the presence of Drs. Rodgers, Parker, Parry, Ehler, M. M. Nithens, and John L. Atlee, Jr., and Messrs. Weiger, Brensman, and Frick, medical students. The temperature of the room had been elevated to 80° F., and it was steadily maintained at that for several subsequent days. The bladder having been evacuated before placing her on the table, she was put under the influence of ether and chloroform, and an incision made through the skin, cellular and adipose tissues, to the fascia, from one inch below the umbilicus to two inches above the pubis. The fascia and peritoneum were then successively divided upon the director to the extent of the external wound. The large cyst was now exposed, occupying the upper, lower, and right side of the abdomen, presenting, on its left aspect, a deep sulcus between it and a second cyst, which filled a large portion of the left lumbar and iliac regions. The hand was then introduced, and the adhesions caused by the previous tapplings separated, as were also a few between the right abdominal wall and the cyst. It was then swept across the fundus of the cyst, and passed down between it and the omentum, so as to detach it in the few places where slight adhesions existed. Trochars were now introduced, and both cysts rapidly evacuated, the smaller one containing about four pounds of a straw-colored and less viscid fluid. Several smaller cysts, two or three times as large as the fist, were developed in the base of the tumor, rendering an enlargement of the wound, one inch at each extremity, necessary, before it could be drawn out. No other adhesions were found, except at the pedicle. The tumor, in its development, had deviated from the usual course. It had expanded the broad ligament, and encroached upon that portion of the peritoneum existing between it and the colon, so as to leave the pedicle but one inch long, four inches broad, and highly vascular, for the application of the ligature. In conversation with my brother, Dr. Washington L. Atlee, in February last, he had recommended the "écraseur" for severing the pedicle, and, as I had seen at least one fatal result from the application of the silk ligature to the pedicle too near to the colon, and as the use of the silver ligature of Dr. Sims, although less irritating than silk, would leave the proximal portion of the pedicle a sloughing, irritating mass within the abdomen, I determined to use the écraseur. The whole tumor being firmly drawn up and held steadily by my son, I surrounded the

pedicle with the forefinger and thumb of the left hand, and grasped it very firmly. The chain of the instrument was now passed round it above the hand and very close to the tumor, and moderately tightened. By maintaining this position of the left hand very firmly—the screw of the instrument being held by an assistant—I was enabled to operate upon the lever with the right, and to prevent the colon from being drawn toward the chain. The lever was turned for half a minute, then stopped for half a minute, and so alternately until the pedicle was severed, occupying six and a half minutes. (The colon had entirely escaped, with a margin of peritoneum one inch wide.) The torn surface of the pedicle was then carefully sponged and examined; the abdomen was kept closed for several minutes, and no hæmorrhage, nor even oozing of blood from it, could be detected. The fluid which had escaped from the cysts was then sponged out, and the external wound closed by four silver sutures (kindly sent to me by Dr. J. Marion Sims) and adhesive strips, supported by a compress and flannel bandage. During the whole operation the patient suffered but little pain; her pulse, which was 90 at the commencement, remained so when she was put to bed; the only variation was at one period, when for a few moments it became sensibly weaker, and a slight paleness overspread her countenance. There was no nausea or vomiting then, nor at any subsequent period. The whole weight of the mass—solid and fluid contents—was seventeen and a half pounds. Three hours after the operation the patient complained of a *screwing* pain low down in the left side, and occasionally a shooting pain in the same region. Pulse 86, and slightly intermittent; nose cold; skin of arms and hands warm, and a little moist. Has taken nothing but ice and iced water; at two o'clock she took thirty drops of the elixir of opium, having taken thirty when put to bed at half-past twelve o'clock.

5 o'clock, P.M. Patient complains of a strong inclination to pass water. Introduced catheter, and drew off sixteen ounces of straw-colored urine with acid reaction—more, she says, than she had passed altogether during the previous week. Pulse 92, intermitting every eight or ten strokes; has less pain in left side; more in her back; slept nearly an hour; nose quite warm, as is the whole surface, with more fulness and quickness of the pulse; reaction evidently commencing.

7 o'clock, P.M. Patient now entirely free from pain; pulse 96; skin a little hotter than natural.

9½ o'clock, P.M. Patient quite free from pain; skin very moist; heat natural, except of palms, which are hot; catheter removed six ounces urine; thirst considerable; at 8 o'clock took 25 drops elix. opii.; pulse 102; sleeps at intervals. Since the operation she has been more or less troubled with flatulence, without pain.

Wednesday, March 24th, 8 o'clock, A.M. The report this morning is highly favorable; the patient smiled when I entered the room, and says she feels very well; she slumbered nearly all night, waked at intervals and asked for drink; she has no pain, and the only complaint she makes is that the wind is *rumbling* in her bowels; pulse 84, soft, and has lost its quickness; skin, including palms and soles, perfectly natural; perspired all night. It appears as if the reaction, which

commenced at 5 o'clock yesterday, has entirely subsided, and left her with a better pulse than I have known her to have since I commenced my attendance upon her. Removed by the catheter eight ounces of urine; mind calm, clear, and hopeful; she completed her sixty-first year on the 8th inst.

12½ o'clock, P.M. Patient in all respects the same, except pulse, which is 90; to continue cold water and ice, *pro re nata*.

7½ o'clock, P.M. Patient still lively and comfortable; pressure on the abdomen in the left iliac region gives some pain or feeling of soreness; has passed wind from the bowels this afternoon; bladder troublesome; removed by the catheter ten ounces of urine, of normal color and acid reaction; pulse 79. The intermission in the pulse, remarked yesterday, passed off during the night, and the action of the heart has been perfectly regular all day; tongue clear, skin moist, and of natural temperature; to have 25 drops elix. opii.; allowed thin arrow-root gruel during the night.

From this time until the 27th of March, 5th day, no unfavorable symptoms were manifested; the patient, on the contrary, steadily improving; examined the wound, and found it united throughout the whole extent, the lint covering it as clear as when first applied. There had been no serious discharge from the abdomen, as in all my other cases where the ligature was removed; no trace of inflammation around the silver sutures, which were removed on the 7th day; on this day she sat up for the first time out of bed.

From this time my patient sat up daily; on the 9th day the bowels were moved, for the first time, by a dose of castor oil; the discharges consistent and natural; she had been gradually allowed a more generous diet, and was increasing in strength.

On the following Monday, the 14th day, she rode with me half a mile, to my office, to see the tumor, and since then she has remained perfectly well.

This case is the eighth on which I have operated for the removal of enlarged ovaria, in two of which both the ovaria were diseased and removed, one only proving fatal, the patient dying on the 12th day. In all the previous cases I could perceive the disturbing effect of the presence of the silk ligature around the pedicle, as well as of those used to restrain hæmorrhage, and until they came away they were more or less a source of anxiety both to the patients and to myself. With the *écraseur* to sever the pedicle, and the use of the silver suture and silver ligature, where ligatures are necessary, I am satisfied that a very large share of the dangers attending the operation will be obviated. Mrs. E. is the oldest patient upon whom, I believe, the operation has been performed—Dr. Clay, of Manchester, England, reports his two oldest at 57 and 58; she was excessively reduced by the frequent tapping and refilling of the cyst, as well as by the previous very active medical treatment to remove the dropsy, and yet she recovered more rapidly and with much less constitutional disturbance than any other patient upon whom I have ever performed a capital operation. This I attribute very much to the use of the *écraseur* and the absence of any ligature involving the peritoneum.—*N. A. Medico-Chirurg. Review*.

Treatment of Nursing Sore Mouth. By M. L. KNAPP, M.D.

The first case of the nursing sore mouth affection that fell under our observation and care, and the first time we remember to have heard of this popular name for a disease, was at Springfield, Illinois, June, 1835; the memorable year of scanty vegetable supplies, and lamentable state of the public hygiene before spoken of.

The patient resided in the village, and was suckling her third child, an infant then about eight months old. She had been laboring under the affection three or four months before our advice was solicited, and had been treated without marked or permanent benefit. It was an habitual affair with her; she had had an attack during each of her former periods of lactation, in the State of Massachusetts, from whence the family had emigrated; had weaned her infant on each occasion to save her own life, and both had died of cholera infantum; and her infant at the breast was laboring under it. Her medical attendants advised, insisted, indeed, on the weaning of the infant as her only chance of recovery, but she pertinaciously refused, and fell under our care.

Our impressions, on first seeing the case, were, that the woman was mercurialized—she seemed to be laboring under a moderately severe pytalism. Her mouth was sore, sensitive to hot drinks, she could not masticate solid food, and still there were no very distinct ulcers to be seen; but there was a general scalded condition of the mouth, with pytalism and a fœtid breath. She was very anæmic, of almost alabaster paleness—had a diarrhœa that no remedies seemed adequate to control—much pain and tenderness of the abdomen—was very much emaciated—so weak she could but just get up, and occasionally walk about—there was a tendency to fainting and swooning that had excited the greatest alarm, and threatened to prove fatal on several occasions—she was exceedingly desponding, and continually apprehensive of evil. One circumstance alone seemed favorable—her appetite was good.

After a full and careful investigation of her condition, we had no difficulty in diagnosing this nursing sore mouth case to be of a scorbutic character, and the result of treatment abundantly verified our diagnosis. Lemon juice, loaf sugar and water, with brandy and a little morphine, constituted the main medical treatment; and as to diet, we fed her on strawberries and ice cream; bread and milk with strawberries; clabbered milk with sweet cream and sugar; stewed currants; stewed gooseberries; panada made with champagne wine, etc., allowing her as much variety as the scanty vegetable supplies of that spring afforded. All the old potatoes had long been exhausted, and new ones had not come in. All the small fruits of the season were freely allowed, and if not fully ripe were stewed. Custards were also a standing dish in her dietary. Animal soups, and broths too, with cabbage, carrots, etc., added, and highly flavored with savory herbs, and well seasoned with salt and cayenne pepper, were ordered daily at her dinner meal. Under this generous dietary, *gradually adopted*, the bowels at the same time restrained with brandy and sugar, and a

little morphine, regularly administered; with daily ablutions and frictions of the skin, and a draught of solution of bicarbonate of soda, about half an hour after every meal, the patient was rapidly restored to health; *and the puny infant also.* In three weeks the mother was restored to a better state of health than she had enjoyed since the birth of her infant. She nursed her infant through the summer, having a greatly increased flow of milk, and escaped the bilious fever, which was so strongly epidemic that season. The infant, though it recovered from its summer complaint without medication, took the ague in September, and was afflicted with it more or less through the following winter.—*Knapp's Primary Pathology.*

EDITORIAL AND MISCELLANEOUS.

The Academy of Medicine had an extra session in June, at which the topic of interest was a discussion of the structure and functions of the prostate gland. By the appointment of the Section of Anatomy, Dr. W. H. Van Buren opened the subject. After going over the anatomy, both general and microscopic, of the organ, Dr. Van Buren expressed his opinion as to its functions, to be, that it is in no proper sense a gland; that it is, or a portion of it is, considered anatomically, the analogue of the uterus in the female, while its pathological developments, by their similarity to those of the uterus, make the analogy still more complete; and that the purpose of the muscular mass constituting the body of the organ, is to enable it to eject the semen.

This the speaker considered as its real function and the purpose for which it is designed. The existence of the third lobe was questioned, and the erroneous notions arising from that name given to a portion of the isthmus, commented upon. An interesting discussion followed, which was shared by several of the prominent members. In the course of it, the opinion was expressed, that enlargement of the prostate is not the uniform result of advancing age, but the exception, and that it is as yet impossible to say to what it is due. Dr. John Watson, in the course of his observations, made a remark of great practical interest and value. He said that he believed that many cases of retention of urine in elderly men were ascribed to enlargement of the prostate when there was no such thing. He had been called to relieve them, and wished to draw attention to their actual condition. In consequence of the sluggish movement of the bowels, the colon especially,

the sigmoid flexure becomes loaded and distended, and occupies the pelvis on the left side. If now the bladder is allowed to fill beyond a certain degree, and to become at all distended, it is very evident that it cannot occupy the space on the left side of the pelvis, to which a portion of it would naturally reach. The bladder is, therefore, crowded to the right, and that in proportion to the degree of distension of the bladder and of the colon. From this crowding the neck of the bladder is carried to the right, and forms a valvular passage instead of a straight tube, and this valve entirely shuts off the escape of the urine. The ordinary manipulations for passing a catheter beyond the middle lobe of the prostate will not relieve this retention, but the difficulty can be overcome by simply turning the beak of the instrument to the right after it has reached the neck of the bladder, when it will readily pass into that viscus. The preventive of its recurrence, is to keep the bowels freely opened so that accumulations may not again occur in the colon. It is proposed to resume the discussion at another meeting.

At the July meeting puerperal fever again came up, and Dr. Clark gave a full account of his use of large doses of opium in the treatment of that disease. Dr. C. does not recommend this treatment for all forms of the disease, but only for puerperal peritonitis, a distinction which it is very important to make. For success in its use, the patient must be taken soon after the appearance of the disease, and its effects must be carefully watched, some patients requiring much more than others will bear. The particulars of this treatment have been pretty fully laid before the profession, and it is not necessary for us to repeat them.

Dr. Barker said that he thought that the subject was far from being exhausted, and that if the Academy were not wearied with it he should be willing at some future meeting to touch upon some interesting points which still remained. He then proceeded to reply briefly to some of Dr. Clark's positions, and gave a condensed but lucid sketch of the discussion of the same subject by the Academy of Medicine of Paris. At the conclusion of his remarks a vote was passed unanimously, requesting Dr. B. to continue the discussion at the August meeting.

—Few of our readers can have failed to notice that a great excitement has been raised in this city, by the accounts published by one of the weekly illustrated newspapers, of the condition in which cows are found which are kept in the city for the purpose of furnishing milk to the citizens. The wood cuts illustrative of their state aroused the at-

tention of those who had frequently seen the same statements in print without giving any heed to them. To hear that an animal has to be held up in a swing to be milked because it is too weak to stand, or to hear that when treated in certain ways, cows are covered with sores and lose their tails, though still milked, makes much less impression on the mind than when the same facts are set forth by good wood cuts. So much attention has been drawn to the matter, that the public instinctively turn to medical men to learn how much injury to the public health results from using such milk. We have regretted to observe that in their replies, physicians have been too prone to give their theoretical objections, rather than their opinions fortified by facts. Some have not hesitated to ascribe the large mortality of infants in New York to the use of milk from these animals—commonly called *swill milk*. Others, though hesitating to go this absurd length, still allege that the milk is of necessity injurious to all, adults or others, who use it, because it comes from diseased animals; while a third class has been found who declare the milk to be pure, good, and wholesome.

What is the cause of such diversity of opinion, but a failure to note facts bearing upon the subject? That milk causes by its use a large proportion of the diarrhœas of young children, which so often terminate fatally, is not to be denied. But it is not shown that it is *swill milk* that is used. In point of fact, it is not, in the majority of cases. The purest milk from a healthy, clover-fed cow, will frequently, if given to a very young child, cause a most severe diarrhœa; and perseverance in its use would be fatal. The country milk furnished to us of the city in the morning, is from the milking of the previous evening, if not of the previous morning, and is at least twelve hours old when delivered at our doors. A weaned child, therefore, that depends on it, cannot have new milk at all, and if fed during the night its milk must be nearly thirty-six hours old. During this time it has been jolted from the farmer's house to the railroad depot, has been jolted from the country depot to the city, and been jolted about the city by the milkman. It is not in the nature of the best of milk to bear all this, especially during weather in the least degree warm, without undergoing serious changes. By experience the milk dealers have learned to guard against some of these changes, by adding various substances, as soda and salt, to the milk; but even these additions render the milk unfit for infants. It is then evident that the milk from animals in the city is not exposed to all this jolting, and can be delivered to customers soon after it is taken from the cow. Thus far, then, it has the advantage over milk brought from the country.

But the important question with reference to it is, is its composition the same with the milk of country-fed animals? and if not, does it differ in such respects as make it unfit for food? and especially, is it unfit for children?

Reference to the valuable article in this number on the subject of milk, together with that by Dr. Cummings, in the preceding volume, will enable one to judge of the fitness of swill milk for infants. Chemical analysis shows that it contains a much larger proportion of casein than the milk of grass-fed animals, and a much smaller proportion both of butter and lactine, or sugar of milk. Now, as compared with woman's milk, that of grass-fed cows is too rich in cheese and too poor in both butter and sugar, for which reason it is that in feeding infants with cow's milk a portion of cream has to be added to it to increase the butter, and loaf sugar to sweeten it. The *swill milk*, then, being much more deficient in both of these elements, is to a greater degree unfitted for use in the artificial nursing of children; and if the proportion of butter and sugar is as small as the chemists report it to be, the swill milk is almost entirely unfit to use for infants, and would be put poor diet for older children.

Still we are not prepared to say that it is worse than much of the country milk that is sold in town. The salts added to that have been alluded to, and when we take into consideration the fact that in many of the milk districts a portion of the cream is removed every day, it seems doubtful if it is much richer in butter than *swill milk*.

The effect of disease upon the milk is a separate matter, and one that is not so easily decided upon. We should not wish to use the milk of a cow covered with sores, and yet it might be difficult if not impossible to show that it is injurious. Women, with varicose ulcers, nurse their children with success, so that the existence of a sore is not of necessity a decided proof of the inferior quality of the milk. But the burden of proof remains with those who vend the milk from diseased cows, and till they can show that it is not injurious, they ought to be prohibited from selling it.

— *Pure* cod liver oil is by no means secured by buying bottles which are so labelled, and in some investigations as to the purity of this article, we have come to the conclusion, that not a little lard oil passes itself off as the genuine article. To this fact we attribute much of the dissatisfaction which is experienced by physicians in prescribing it, and its frequent failure to agree with the stomach of the patient.

During the last winter our attention was called to the article sold by Messrs. Hazard & Caswell, of Newport, Rhode Island, and we

have been very much pleased with it. In fact, it seems to be the cod liver oil, fresh and unadulterated. It is prepared for them at Block Island, which is in a portion of the Atlantic abounding in these fishes, and they are taken in large numbers close to the island, and brought on shore to be dressed. It is thus possible to obtain the livers in the freshest condition, and from them the oil is immediately separated. So rapidly is this done, that the oil is sometimes on sale in New York forty-eight hours from the time the fishes were caught. The manufacture being overseen by a professional gentleman, who takes every pains to secure its purity, we do not see that anything is left to be desired. The oil is of a light straw color, has none of the strong, rancid fish odor which we usually attribute to it, but is sweet and pleasant to the taste. We have had patients use it who have tried almost every manufacturer's oil, and give this a decided preference. It is easily digested, and does what is expected of it. Physicians will find their patients will be benefited by using it, when they need to take this oil.

— Quite an energetic movement is making in this city to endorse the claims of Dr. Morton, of Boston, as the discoverer of the anæsthetic properties of sulphuric ether. A paper is circulated for subscriptions, recommending that a large sum be made up for him, and it is being very generally signed. Probably very few of our physicians are fully aware of the real claims in this dispute, and we know that some signatures have been added for the sake of not appearing to be odd. Had the paper been an endorsement of Dr. Jackson, it would have received most of the signatures which it now has, and some which it now has not. The last visible movement in Dr. Morton's favor is thus recorded in the proceedings of the Board of Ten Governors, who have the management of Bellevue and several other hospitals.

Mr. Gunther offered the following resolution:

That this Board view with high appreciation the initiatory steps taken by the Medical Faculty of the city of Boston and of New York, to acknowledge, in a substantial manner, the discovery and appliance of sulphuric ether, by Dr. Wm. T. G. Morton; and believing the same to be, as expressed and set forth in their testimonials, the greatest benefit of the present age rendered to science and humanity, deem it our duty in consideration thereof, and of the many uses to which the same has been applied in the Institutions under our charge, to vote towards the National Subscription Fund, as instituted by the Faculty, the sum of \$1,500.

The mover of the resolution spoke of the miraculous power of the vapor of sulphuric ether to produce a safe insensibility to pain during surgical operations. It is generally conceded by the Medical Faculty

of this country and Europe that the discovery of this anæsthetic agent was due entirely to Dr. Morton, who, by years of experiment and sacrifice of a fortune and loss of physical and medical faculties, was instrumental in giving the benefit of his researches to the world. He hoped the slight testimonial now asked for would be unanimously given.

Mr. Maloney said he was not prepared to vote on this subject at present; it was a matter entirely new to him. He would prefer to have it postponed until a future occasion, so that he could vote understandingly in giving away of the people's money.

Mr. Townsend thought the Board had no right to vote to make such an appropriation for such a purpose. It was their duty only to take care of the paupers and criminals—at least, he thought it could not be done unless reported on by a Committee.

The subject was referred to the Committee on Bellevue Hospital to report.

— The attention of the public has been already called to a unique and beautiful monument to the late Dr. Wm. Kelly, of the Blackwell's Island Hospital, which has been lately completed at the marble yard of Inslee & Co., corner Bowery and 3d Street. Within the past few days it has been removed to Utica, N. Y., where, as a cenotaph, it will record the memory of a worthy son and brother, and recall to his medical brethren their sad loss of a valued member, stricken down almost at the onset of his professional race.

Dr. Kelly was of Scotch descent, and a native of Charlton, Saratoga County, N. Y. He was graduated at Union College in 1841, and remained in Schenectady, as a fellow of that institution, during the four succeeding years. In 1845 he took charge of the Union College Grammar School, in connection with David H. Chettenden, D.D., (since well known as an able educator and lecturer,) and at the same time commenced also the study of medicine with Dr. A. M. Vedder, of Schenectady. In 1847 he came to New York to attend lectures, and in 1848 took the degree of M.D. from the College of Physicians and Surgeons.

Soon after graduation he received the appointment of Assistant Physician to Bellevue Hospital, then under the Presidency of Dr. David M. Reese. The organization of Bellevue Hospital then included all the various institutions on Blackwell's Island (since put under separate organizations,) and the Long Island Farms or Nursery, then located at Ravenswood, before the purchase of Randall's Island.

These were all under the Resident Physician of Bellevue, and of each his staff had in turn the charge. The change of system in 1849, which abolished the office of Resident Physician at Bellevue, found

Dr. Kelly in charge of the Penitentiary Hospital, and his service had proved so entirely satisfactory to the Ten Governors, that by a unanimous vote he was continued there as Resident, with an increase of salary, and the privilege of selecting his own assistants.

From this time until his resignation, in October, 1853, Dr. Kelly's discharge of duty was most exemplary and faithful. The field was one which gave peculiar exercise to his abilities, and the rare qualities of his mind and heart were fully tested. The ingenuousness of his address, the strong Christian principle that governed every act and curbed a temper naturally impulsive, made his daily influence in the hospital a blessing to his patients, and a most conservative and valuable example to his assistants. No one of his staff will soon forget that constant exercise of manly sympathy and kindness, which, pervading the house through his presence, made the wards attractive not merely as a field for medical observation, but no less so as a school for the gentler charities.

We cannot too much regret that Dr. K.'s sudden death left his manuscripts incomplete. His observations upon uterine disease and the varied forms of constitutional syphilis he would undoubtedly have published, had he lived to settle in New York.

After leaving the hospital, in the autumn of 1853, he prepared for a tour in Europe, and especially for a sojourn in Paris, to complete, under Ricord and others, the investigation of those subjects which interested him most. On the 27th of December, 1853, he sailed for Havre in the packet ship "*Constitution*," in company with Dr. Churchill, of Utica, an intimate friend and former student.

The terrific gale of December 29 will long be remembered by those who mourn the loss of friends in the ill-fated "*San Francisco*." In this storm the "*Constitution*" also went to pieces. On the morning of January 1 the captain of the Belgian brig "*Bellona*," drifting under bare-poles at a most fearful rate, passed, off Cape May, the wreck of a vessel, on whose stern he read by the gray light of dawn the name "*Constitution*."

This is the sole record, and here the history ends. Not one of the ship's company survived; and though the friends of Dr. Kelly for two years clung to the hope that he had perchance been picked up, and might yet return, it was a hope that no joyful experience has ever verified. With the reluctance of grief to acknowledge its loss, they have at last recognized the truth, and his surviving sisters cherish his memory in this monument.

The design is wholly original, and is the work of *Dr. F. N. Otis*,

the "artist surgeon" of the steamer "*Moses Taylor*." It consists of a corinthian column, of fair proportions, riven, as by a thunderbolt, from its capital nearly to its base; while from the centre rises, superior to the shock, a delicate cross in full relief. The cubical base is inscribed as follows—on one side:

"DR. WILLIAM KELLY,

Late Physician-in-chief of the Blackwell's Island Hospitals, New York City;
who sailed for Havre in the ship 'Constitution,' and was lost in the
wreck of that vessel off Cape May, December 31, 1853,

Æt. XXXIII."

On the second:

"THE BELOVED PHYSICIAN."

On the third:

"JESUS SAITH UNTO HER, THY BROTHER SHALL RISE AGAIN."

On the remaining panel an elaborate intaglio represents a ship foundering at sea. Its hopeless struggle with the tempest is illuminated only by a single star, which pierces the lowering clouds, and seems to send a ray of hope, the promise of a higher light beyond the present darkness. As a friend has most forcibly observed, "the first and fourth panels tell a most truthful tale to the most casual observer; the second, that to those unfortunates for whom the world has no charity, but to whom he devoted his best years in hospital service, he was indeed 'the beloved physician.' The third belongs peculiarly to the sorrowing sisters, and is a memorial at once of their affection and their faith."

To say that the monument is fully worthy of the subject, is sufficient. Time has well nigh closed the gap occasioned by our friend's departure, but the lesson taught by a hasty review of his life and his melancholy fate is still fresh and emphatic. "*Non omnis moriar!*"

— Dr. J. C. Nott has resigned the Chair of Anatomy in the University of Louisiana, and Prof. T. G. Richardson, who has occupied the Chair of Anatomy in the Pennsylvania Medical College, has been appointed to supply the vacancy. Prof. Richardson is associated with Prof. Gross in the editorial charge of the *North American Medico-Chirurgical Review*, from whose columns we shall be sorry to miss his supervision and imprint, which may be necessitated by this change; but hope for a transfer, not a cessation of his editorial labors.

— In a case of fracture of the neck of the inferior maxillary bone, Dr. Heydock, of Chicago, lately devised a very simple but effective apparatus for its treatment. Next month we expect to give a report of the case, which was perfectly successful, with drawings of the apparatus.

— *Honors from Abroad to Dr. Mott.*—Dr. VALENTINE MOTT, the greatest of living surgeons, received by the last steamer his diploma as Honorable Fellow of the Royal Medico-Chirurgical Society of Edinburgh—an honor which, we believe, has been conferred upon no other of our countrymen. Were the Doctor to practice annexing his honorary titles to his name, on all occasions that his name is borrowed, to add lustre or character to any worthy public enterprise, as the custom of some is, he would have need of a strong corps of amanuenses. Besides his home honors, he is Foreign Associate of the Imperial Academy of Medicine of Paris—no other American is; Honorary Fellow of King's and Queen's College of Physicians of Ireland; Fellow of the Royal Medico-Chirurgical Society of London; of the Royal Medical Society of Brussels and of Athens; of the Chirurgical Society of Paris; Knight of the 4th order of the Mejidid of Constantinople, &c., &c.—*N. Y. Times.*

— The corner-stone of the new Island Hospital, on Blackwell's Island, was laid with appropriate ceremonies on Thursday, July 22nd. From the address of Washington Smith, Esq., President of the Board of Governors, we extract the following description of the building to be erected:

The building is to be three and a half stories high, with a stoop roof, by which means there is a gain at a small expense of a full hospital story, 16 feet high, lighted by windows between the cornice and dormers above the cornice. The basement arrangements appear to be complete. The height of ceilings of first and second stories is 14 feet, third story 16 feet.

On each story of each wing there will be in the centre of the building three wards, each capable of containing twenty patients, and two wards in the wings or transverse ends, each capable of containing 32 or 24 patients, as may be decided upon; each ward to be provided with a single bedroom for particular cases; water-closets to be separated by wells of skylights from the building proper. There will be two principal stairways and two hoistways for patients. Bells and speaking tubes will be carried from each ward to the room of the medical staff in the third story of the centre building, and a speaking tube from the third story of the main building to the office and bedroom of the resident physician. The number of patients that can be accommodated without inconvenience will be as follows:

Four wards in basement, 24 each	96
Six wards in first story, 20 each	120
Four wards in first story, 24 each	96
	— 216
Wards in second and third stories	432
	—
In all	744

The wards are all laid out upon a plan adopted by a commission in France, after an examination of the principal hospitals in Europe. It is proposed to adopt the general principle of ventilation of La Reboissiere Hospital, of Paris, now considered the best in Europe. A general fresh-air conductor, fed by a blower from a raised air chimney outside of the building, is carried underneath the basement floor. From this vertical supply tubes, diminishing in the area as they rise, distribute the fresh air in summer, and the heated fresh air in the winter, to each ward, bathroom, and closet.

The wards are supplied by horizontal tubes with vertical pedestals; in each ward these pedestals are covered by perforated plates of metal. The foul air is conveyed from over every two beds of each ward by pipes of glazed earthenware, to the top of the wall, where they are conducted to the foul-air chimneys by tubes of metal. The circulation is produced by coils of steam pipes or stoves in the foul-air chimneys. The heavier gases are taken through openings made around the base of the rooms. It is proposed to force river and fresh water into tanks under the roof by the same engine which drives the blower, and to have hot and cold water tanks at regular distances over the water closets and baths.

The outside walls to be constructed of rubble-stone masonry with hammer-dressed or pointed corners. The outside walls to have an eight inch air space, and four inch inner or furring wall of brick inside of the interior stone-work.

— We learn from the *Cincinnati Lancet and Observer* that a new medical journal is about to be established in North Carolina, under the patronage of the State Medical Society. Dr. Edward Warren, of Edenton, N. C., was appointed editor. It is to be a bi-monthly of 100 pages, at three dollars a year.

— Dr. J. H. B. McClellan, of Philadelphia, has been elected to fill the vacancy in the Pennsylvania Medical College occasioned by the removal of Dr. Richardson to New Orleans.

— Dr. R. K. Smith has been re-elected Chief Resident Physician to Blockley Hospital, Philadelphia, which place has lately been occupied by Dr. McClintock, much to the annoyance of many of the profession in that city.

— Dr. S. G. Armor has resigned the Chair of Pathology and Clinical Medicine in the Missouri Medical College, and Dr. McMartin, of St. Louis, has been appointed to fill the vacancy.

— Correspondents will notice the change in the business office of the MONTHLY, and please direct their favors accordingly.

THE AMERICAN MEDICAL MONTHLY.

SEPTEMBER, 1858.

ESSAYS, MONOGRAPHS, AND CASES.

The Cervix Uteri in its Obstetric Relations. By AUGUSTUS K. GARDNER, M. D., &c.

(Read before the N. Y. Academy of Medicine, March 3rd, and published by permission.)

GENTLEMEN—Scientific research has now, as it appears to me, demonstrated incontestably the anatomical division of the hollow organ so long known as the uterus, into two portions—the neck and the body. Henceforth we must recognize two distinct organs; the one, the cervix, composed of firm, but elastic structure, scantily provided with blood vessels, and in which but a small trace of nerve tissue is found. The body of the uterus is composed of a coarser fibre and muscular tissue, capable of much hypertrophy, abundantly supplied with both arteries and veins; also with nerves, concerning which no little research has been undertaken, and some controversy has resulted, especially between Drs. Lee and Snow Beck.

The uterine nerves originating from the hypogastric, sacral and spermatic nerves, descend to the cervix, where, according to Dr. Lee, they terminate in the hypogastric ganglion. The nerves in the virgin uterus are arranged in a serpentine form, and are always accompanied

by a branch of an artery and vein. According to Dr. Lee, these nerves enlarge with the growth of the uterus in pregnancy, again diminishing as it returns to its natural state, after parturition. Dr. Snow Beck contradicts Dr. Lee, believing that the nerves of the uterus are not so large or so numerous as they appear in Dr. Lee's dissections. He considers that the nervous arrangement at the neck of the uterus should be called the pelvic plexus instead of the hypogastric ganglion; that the sacral nerves do not enter into that portion of the cervical plexus which supplies the uterus, but they are distributed to the vagina and other parts. Dr. Snow Beck also believes that there is no increase in the size of the nerves during pregnancy, but that the nerves which in the virgin uterus have a sinuous arrangement, become straightened during gestation. These conflicting opinions are in some manner reconciled by remembering that Dr. Beck, in his minute dissection, stripped the nerves of the neurilemma, which Dr. Lee, supported by M. Robin and Dr. Heschl, contends is the portion which chiefly enlarges.

The existence of nerves in the cervix has been denied by some, but the researches of Dr. Lee seem to settle the matter, as he has demonstrated that a few nerves springing from the hypogastric ganglion are distributed over the interior surface of the os and cervix. We are aware that the opposing statements of Dr. Beck have been judged to be correct, but the points of conflict do not materially affect the subject in the practical view I take of it.

Without this anatomical demonstration, the nervous sympathy between the cervix and the body of the uterus, especially when the sensibility is exalted by the chronic inflammation to which the former is subject, is evident to accoucheurs and uterine pathologists, whose daily observations evince the fact.

This anatomical distinction of one apparent organ into two bodies is not without its correspondences in the human economy. The brain is divided into the cerebrum and cerebellum; the testis into the testis proper and the epididymis: the kidney, according to the research of our learned Isaacs, has been demonstrated, in this Academy, as divisible into the true kidney and the supra-renal capsules.

These anatomical distinctions have led to pathological divisions and correlative treatment. I purpose now to make similar distinctions, and to ask your attention to some practical suggestions respecting the treatment of various forms of difficult parturition, arising from morbid conditions of the os and cervix uteri.

Rigidity of the os uteri is probably the most frequent cause of dysto-

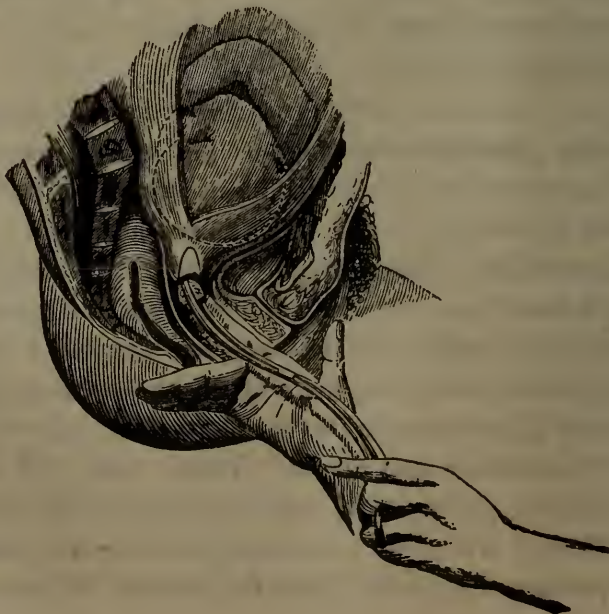
chia—perhaps more common, if not so serious in its nature and results, than all other causes combined. One need attend but a few labors to find instances where everything seems to encourage the hope of a speedy and favorable termination; but a firm and unyielding os resists severe and prolonged pains, wears down the strength of the patient, the spirits of attending and anxious friends, and the patience of the physician. For such cases I offer no new relief. The benefits of tartar emetic, opium, venesection are familiar to all; injections *per anum* of anti-spasmodics, as assafoetida, etc., and inunction of the os uteri with the extract of belladonna, have been fruitlessly tried by others; but there are some other methods of treatment less common, which I will venture to enlarge upon.

The case is before us of a healthy woman of abundant muscularity, young and vigorous, or old and inelastic, perhaps feeble and suffering from organic disease, such as to make the repeated efforts of straining not only exhausting but dangerous to life, from the rupture in a tuberculous lung or of a diseased heart. The waters have long since flowed away, the os is dry and hot, hard and unyielding to the head, pressing strongly upon it, even while the general strength seems giving way; chloroform is the great remedy, given not niggardly, although gradually and with great care, watching both pulse and respiration, even to full anæsthesia. In such cases I have seen, and many around me I know have also, the heat depart from the os, the dryness disappear with the recurrence of the natural mucous exhalation, the rigidity vanish and dilatation result, and with the renewed pains upon “letting up” the anæsthesia, a speedy delivery crowning the work. It is in these cases where chloroform is indeed a boon from heaven, of which too much can scarcely be said.

But there are instances where the rigidity does not appear to be of this apparently spasmodic description, but where, perhaps from a chronic inflammation, there seems to be an infusion of fibrinous matter into the tissue of the cervix, and which is not amenable to the passive powers of anæsthetics. These require more potent remedies, and not unfrequently I have found rigidities relieved by the employment of the *douche*, as first recommended by Kiwisch and adopted by many others. This is simply the throwing of pure water with any ordinary self-injecting india-rubber (Mattson’s or Davidson’s) syringe against the os uteri and base of the bladder and uterus. This in itself will, either by its nervous shock or by destroying the integrity of the ovum, produce premature delivery, where we are compelled to do this serious operation for the preservation of the life of the mother. Warm water seems

to have the best relaxing effect when labor has fairly commenced, and where only relaxation of the os uteri seems requisite to complete the delivery. Cold water seems to act more efficiently in stimulating the tardy uterus to action, where labor has commenced but has halted or delayed in its progress. Sometimes the alternation of the douche at different temperatures will effect the relaxation of the os, and at the same time, by the shock, stimulate the perhaps flagging uterine action. A gallon or two of water should be thrown against the os in dystochia from rigidity, every half hour or hour, till relief is attained if possible. As an incentive to uterine action in the case of attempted miscarriage, the douche need not be repeated more than three or four times a day, and in a day or two labor pains will gradually commence and increase in strength. To effect this purpose, the douche, although not always effectual, is the safest and pleasantest operation, the labor ensuing is more natural, and no possible injury can be done to the organs by the operation.

But sometimes the nature of the os uteri is so changed by disease or inflammation from friction, etc., that it is cartilaginous in its consistence and in the character of its internal or external tissues. Some positive force must take the place of the passive treatment just recommended. If the pains are not violent, or if they can be temporarily suspended by an opiate, or in conjunction with anæsthetics, especially if it be an abortion or premature delivery, accompanied by hæmorrhage, then *plugging the os uteri with a sponge tent* will, with some efficiency, if there be time for this delay, dilate the mouth of the



uterus, and in the latter cases act as a tampon and prevent hæmorrhage, save in the cases of abortion (to produce which it was first recommended by Kluge) or miscarriage. I cannot say that I place much reliance upon this surgical appliance.

But there are cases that resist all such moderate attempts at overcoming the rigidity; the os seems to be converted into cartilage; it has stretched out till it is an inch or two in diameter, and then, firm, thick, hard, dry, hot perhaps, it does not, possibly cannot, dilate. With the extreme violence of the pain, the head has descended into the cavity of the pelvis, bringing the surrounding os with it. Sometimes the os, by a violent pain, is torn off and forms a perfect ring, as lately shown at the Pathological Society in this city. What is to be done? There is no alternative. *Incision of the os* is imperative, and it is a perfectly safe operation. I have done it three times with perfect success. We all know, too, that the os tears: we have felt it give way under our finger, we have felt it after the labor; we often see, with the aid of the speculum, the os torn and ragged and ulcerated on these torn edges, the sequelæ of difficult labors. Cut it, then, with long scissors or with probe-pointed bistoury—cut it anywhere. Writers theoretically advise who have never done this operation, and one cautions against dividing on the sides lest it tear up and so divide the uterine sinuses; and another, not to divide anteriorly and posteriorly, lest the bladder or rectum be injured. I have divided the os both anteriorly and laterally, and always without any hæmorrhage, subsequent inflammation or apparent ill consequences. It is unattended with pain, the patient noticing only a sudden feeling of power to assist the uterine action by voluntary muscular effort. There is no difficulty in the operation, the bistoury being guided upon the finger and the incision being made outward, and the edge guarded by the finger, lest it wound the vagina after having divided the os and cervix.

Division of the os uteri has really little danger, although occasionally followed by some bad results. August 11th, 1846, I attended a woman in her fourth confinement, who previous to this had a prolapsus of the uterus to such an extent as to protrude from the vulva to the length of two or three inches, and impregnation had taken place by the insertion of the penis into the os uteri! She had strong labor pains when I arrived, and on making an examination, I found a large mass, the os uteri projecting some inches from the centre of the vulva, which I supposed were œdematous labia, with edges hard, swollen and everted, bearing a strong similarity to the nose of a demijohn. The orifice easily admitted two fingers, above which the head was pre-

senting in the position of the vertex. After delaying till symptoms of convulsions appeared, the os remaining undilated, hard and dry, I applied the short forceps through this os. Traction but brought down the head with the enveloping os, to the full extent of the everted vagina. At this period the parts were in a most extraordinary state. The projecting tumor, which exteriorly the vagina and interiorly the uterus, was a cone, eight inches in length, five inches in diameter at the base, where it united with the body, and three inches at its apex. In the apex was the opening, two and a half inches in diameter, through which the hairy scalp of the fœtus, in rugæ with the pressure, was slightly projecting. Dr. Cheeseman was now called; I proposed dividing the os, and, with his assent, I made an incision superiorly, to the length of $2\frac{1}{2}$ inches; the uterine pains tore up this incision $1\frac{1}{2}$ inches further, and a healthy girl was speedily delivered. The hæmorrhage was very slight, and arose principally from its congested state. The os, along its whole border for the width of an inch, was indurated, and the integument thickened, and on its inner surface was changed in its character, so that it resembled cartilage. The uterus never returned to its normal position, notwithstanding that pessaries, astringent injections, etc., were used, but came down when she walked. After a few weeks I lost sight of her. The cut surface speedily cicatrized, but did not unite. Case reported in full in *American Journal of Medical Sciences*, Oct. 1846, in which are quoted two or three corroborative cases, all that exist upon the records of obstetric surgery.

In the same Journal for July, 1852, I report the first case on record, on this side of the Atlantic certainly, of division of the os uteri when internal, for rigidity. The patient was a large, muscular woman, thirty years of age, in labor with her first child. She had been in active labor, when I first saw her, twenty-four hours. The os was rigid, notwithstanding she had been bled a pint, and had taken tartar emetic in nauseating doses and several grains of opium. On examination, I found the vertex presenting in first position, pressing hard upon the os, dilated to the size of a tea-cup top, exceedingly firm and hard. At my suggestion, venesection was again resorted to, and $\frac{3}{4}$ further taken, producing some dizziness but no more dilatation. Twenty-four hours elapsed without the slightest change. She took eight grains of opium in divided doses before receiving any relief, and slept some, and the pains soon resumed with full force, but now diminished, the os not perceptibly dilated, vulva dry and hotter than yesterday. The friends urge some measures for relief. The only reason apparently why the labor does not advance, is the rigidity of the os, and if that could be

overcome, it appears that the labor would go on to a speedy termination. But how to effect this desired result? All the usual modes had been fruitlessly exhausted, mechanical dilatation by the fingers was impossible. A vigorous pain may perhaps lacerate the os. Lacerations of the os uteri are frequent. May it not, then, be cut? The attending physicians advise craniotomy. She had felt no life during the day. Remembering the former case, I determined to divide the os: with a pair of curved uterine scissors, I made an incision upon one side three-quarters of an inch, and on the other a quarter inch in length. The pains were revived by an infusion of ergot, and a large putrid child was delivered. The labor was delayed after the operation, by the head remaining nearly an hour on the perinæum, after passing through the divided os, and the body not being delivered without strenuous assistance. The occiput was to the right iliac anterior. Operations subsequently upon the os uteri have but strengthened my belief in the utility of division of the os for protracted rigidity. Instead of using the scissors, I would prefer a long probe-pointed bistoury, as more convenient and less objectionable from the character of the wound made.



The patient speedily recovered, but for a prolonged period subsequently had profuse leucorrhœa, and was for a long time after childless. Had she been of a less impracticable character, and had submitted to the treatment appropriate to the lacerations and fissures of the cervix uteri, she might have so far recovered as to have again become impregnated.

While I counsel this operation in all appropriate cases where other means have failed, I am aware of its contradiction to the teachings of others, some of whose opinions I will quote.

“I believe we shall rarely, if ever, fail in softening the cervix by some of the remedies I have recommended, and I must beg leave to enter my protest against more active interference.”—*Churchill's Theory and Practice of Midwifery*, page 397.

“Under all circumstances, if you must have recourse to instruments at all, you had better at once have recourse to the perforator.”—*Blundell*.

Baudelocque says: “After a convenient delay, to ascertain that the efforts of nature cannot overcome the resistance, and the administration of proper methods to relax it, it must be cut in several places, as

some practitioners have done. These incisions are preferable to rents which might take place in it, and have never been attended with the same consequences."

Dr. Dewees, quoting the above, thus remarks: "The success of this plan has been verified in this country, as the case of Dr. Thomas Archer most satisfactorily proves, where the uterus, loaded with its contents, was pushed through the os externum . . . he accordingly made three cuts in the uterine circle, . . . each about two inches long; . . . no unpleasant symptom followed." The case is evidently very similar to the one reported by me above.

Dr. Dewees also quotes Moschati, who made several incisions in the circle of the os uteri with success, in 1827.

Dr. Murphy says: "If these means fail, it becomes a question whether we should wait for the death of the child, in order to remove it by the crotchet, or incise the unyielding cervix. The former practice involves a sacrifice of life, but generally secures the mother from the injurious effects which may follow. The latter may be the means of preserving the child, but if the incision lead to a laceration of the uterus, the mother is at once placed in the most imminent danger of her life. The fear of such a consequence, it appears to me, has prevented any attempt being made thus to cut through this Gordian knot of difficult labor in its first stage: but whether this, like other operations, is only surrounded by chimeras of the imagination, which some bold spirit will dissipate, remains yet to be proved. Incision has been performed without accident; the same may happen again; and I confess, in a case such as I have described to you, I should be more disposed to adopt the shorter course, in the hope of saving the child, than to wait until its death enabled me to remove it. This, however, is but an individual opinion, and needs support."

My old instructors, Chailly and Cazeaux have written with more fullness upon this subject. Chailly says: "*Aussi si cet état a résisté aux bains à la saignée, à la belladonne, ce qui arrivera le plus ordinairement, on devra pratiquer des incisions sur les parties latérales de l'orifice, à l'aide du bistouri en croissant ou du bistouri droit boutonné, et mieux encore à l'aide des ciseaux, courbés sur leur tranchant, et conduit sur le doigt jusque dans le col utérin. Il est utile, dans ce cas, de multiplier les incisions, pour qu'elles fournissent une assez grande dilatation, sans qu'on ait à craindre qu'elles ne se prolongent trop haut. C'est aussi pour éviter les conséquences de ce prolongement, qu'il ne faut pas les faire à la partie antérieure et postérieure de l'orifice. En*

effet, prolongées dans cette direction, ces incisions pourraient intéresser la vessie ou le rectum.

“J’ai vu ce débridement de l’orifice suivi du meilleur effet, soit sur des femmes, où la rigidité pure et simple du col était le seul obstacle, soit sur d’autres chez lesquelles les parties étaient plus ou moins altérées.

“Chez une jeune fille âgée de dix-sept ans qui vint accoucher à la clinique, le col à l’état sain d’ailleurs, était tellement rigide, qu’il ne céda qu’aux incisions. L’enfant fut expulsé en position occipito-postérieure non réduite.

“Les incisions furent encore le seul moyen de rendre l’accouchement possible, chez une femme âgée, mère de dix enfans; le col était tellement dégénéré que, de prime abord, il fut pris pour le placenta implanté sur l’orifice.”

Cazeaux writes from less experience: “Si l’orifice externe rétracté est seule cause de la difficulté, on aura recours aux incisions multiples pratiquées sur le pourtour du col.”

Dr. Lever (*Guy’s Hospital Reports*) says such an incision is unattended with danger, unaccompanied by pain, and free from copious or dangerous hæmorrhages.

Rigby says, where the structure of the os uteri has been much injured the resistance will probably be so great as to require artificial dilatation with the knife.

Professor Braun, of Vienna, thus writes respecting the treatment exclusively of eclampsia: “Scarification of the cervix uteri, at a more or less advanced period of the stage of dilatation, for the purpose of facilitating labor, has been recommended by Paré, Mesnard, Contouly, Lauverjat, Dubois, Kiwisch, Killian, Credé and others, and it is done either with a probe-pointed bistoury, a utero-stomatome (two scarificator blades), or long, bent scissors. In the hands of a practised operator, the making of these incisions, under the above-mentioned conditions, does not involve any danger, and contributes greatly to rapid dilatation when the cervix is peculiarly rigid and undilatable. But when we consider the question of the necessity of this proceeding, it is indeed in very rare cases only to be justified, inasmuch as in the literature of the subject only very few observations are recorded in which the performance of hysterostomatomia was found to be indispensable, and that more on the theoretical than practical grounds.” And again:

“The dilatation of the soft parts by incision, which has been recommended by Baudelocque, is without danger only when merely the ex-

ternal os uteri or the vaginal portion of the cervix are incised a few lines deep; it is very dangerous if the os uteri be very thick, or if the undilated part of the cervix still form a canal from $\frac{1}{2}$ to 1 inch (Paris) long, because then the incisions can no longer be exactly controlled, but penetrate too deeply; and the subsequent introduction of the hand or extraction of the fœtus may produce uterine lesions dangerous to life, and under which the patient may sink, after she has recovered from the eclampsia. * * * *

‘Our opinion, therefore, is, that forced delivery, with bloody or bloodless dilatation of the cervix, is never to be resorted to when any injury from it is to be feared; and we think the wise consideration of the success, from the above described methods of increasing the pains, (colpeuryisis, the introduction and retention of an elastic catheter between the chorion and the walls of the body and fundus uteri, tepid uterine douche, rupturing the membranes, secale cornutum, etc.,) affords sufficient reason to induce us to abstain from doing harm either by rash officiousness or irresolute passiveness.”

It is a question worth considering and deciding, of *how much importance is it to preserve the Integrity of the Os Uteri*, or rather should the danger of lacerating it be considered as an objection of any serious moment to an obstetric operation, having for its end the preservation of the life of the child?

I am free to confess that, after much thought and some experience upon these questions, my mind is made up. *The first duty of an accoucheur is to save the life of the mother, the second to save the life of the child*; the mother is to be saved at any cost—the child may be mutilated, destroyed, to effect this end. The child must be saved at any cost short of the life of the mother.

The mother’s safety being secured, the child’s must be sought for with the least possible injury to the mother. The physician who delays delivering a child till it dies from pressure, or asphyxiated, rather than risk injury—not danger to the life of the mother—errs greatly. It is a poor parent that would not hazard even life to save a child in danger; the physician, in a conscientious discharge of his duty, should hazard not the life, but any injury to the mother, be it immediate pain or subsequent disease or imperfection.

The older writers have taught that for all obstetric operations we should wait for the dilatation of the os uteri; and English obstetricians have even insisted that, in addition to this, the head should have so far descended as that the ear may be felt before the forceps may be applied. Still, in cases of arm presentation, it was allowed that turn-

ing might be performed as soon as the os was sufficiently dilated to admit the hand through it.

When death was considered to be the invariable result of rupture of the uterus, and the body of the uterus and the cervix uteri were supposed to be but parts of the same organ, such teaching was proper; but the anatomical discoveries of the nineteenth century make such teachings effete, and new directions proper to be substituted. Injuries to the uterus may be followed by metritis, while injuries to the os and cervix rarely if ever. We see this organ shockingly mangled by unprincipled abortionists, but, unless the body of the uterus is injured, death never follows; inflammation of the os and cervix rarely if ever spreading to the uterus proper.

If, therefore, there be *immediate necessity* for any obstetric operation, do it irrespective of the local condition; *apply the Forceps through an undilated Os*; perform craniotomy through a but partially dilated os; and even, if necessary, incise the os, in order to render an operation practicable.

Not to occupy too much time, I will quote but two cases from my own practice, to substantiate the feasibility of the position laid down.

June 15th, 1855.—Mrs. G——, East Eighteenth Street, was taken in labor with her second child. For several weeks she had experienced severe uterine hæmorrhages under the care of a homœopath. With the commencement of uterine action, Dr. J. W. Francis was called, and noting the profuse flow, sent for Dr. R. S. Kissam. The existence of placenta prævia was recognized, and they remained with her all night and gave such relief as was possible. At their request, I saw her at 4 A.M.; she was blanched, covered with a cold sweat, complaining of ringing in her ears, swimming in head, etc. She then took the aqueous extract of ergot ʒj. every quarter of an hour. She was tamponed, waters not evacuated. I recommended the removal of the tampon, and rupturing the membranes, which was done, and the os found to be dilated to the size of a tea-cup top, the placenta torn from the anterior lip and the border loose, the vertex presenting high up in first position, little or no expulsive pains, some flowing with each pain. The ergot had little effect, and after a half-hour's delay, when it was supposed that she could scarcely survive an hour longer, I suggested diminishing the head and delivering by crotchet and craniotomy forceps, as the speediest method of arresting the hæmorrhage, and offering the only hope of saving her life; as, independent of the uncertainties of the length of time required for the use of forceps, the danger of recommencing the flow of blood by further

disturbance of the placenta, probable in these operations, would be avoided by this operation. I performed this operation with some difficulty, owing to the small opening of the os, scarcely two inches in diameter, and the mobility of the head in the superior strait, and delivered a male child weighing ten pounds. The patient got up without experiencing any unpleasant symptoms referring to the uterus, and 16 months subsequently was again confined without difficulty.

January 18th, 1858.—At the request of Dr. John Bishop, at 6 A.M. I saw Mrs. J.—, Allen Street, in labor with her first child. She had been taken in labor three days previously, but the day before, at 4 P.M., the membranes had ruptured. I found her a short, muscular young woman, much exhausted, the pains excessively strong, and occurring every ten minutes, the os no more dilated than when first seen by Dr. Bishop, now about $2\frac{1}{2}$ inches in diameter, firm but not rigid, and the head in the superior strait, movable, and not pressing upon the os uteri or base of the uterus; even with the extreme pain the os was not pressed upon, the head evidently resting upon the promontory of the sacrum and the os pubis. I advised delay and morphine. She took a grain and a half in three hours, but at 12 M. there was no more dilatation, no rest or cessation of the tremendous pains.

More morphine was advised, and at $4\frac{1}{2}$ o'clock she had taken two grains more with no evident effect, the head only being now immovable, the os still undilated; craniotomy was thought of, but as the child was evidently living I was inclined to apply the long forceps upon the head, still above the brim of the pelvis, although immovable. This through the still undilated os was done without great difficulty, and by strong traction the head was brought down into the pelvic cavity and so as to press upon the os. Chloroform was now given as a relaxant of the firm os, and by continued traction a large but asphyxiated male child was delivered, which after a half-hour's labor breathed with some regularity and lived till 9 P.M. Upon the prominence of the left frontal bone was a spoon-shaped depression, where the pressure upon the promontory of the sacrum had been exerted. The mother made a speedy "getting up." Present—Drs. Bishop, Tuthill, Wilson, and Saunders.

I am fully aware that the opinions here expressed are opposed to the teachings of the authorities. Velpeau says it is not allowable to introduce the forceps into the womb, until the orifice is sufficiently dilated and the head ceases to be movable and loose above the superior strait.

Ramsbotham, like all the older English practitioners who prefer craniotomy to the long forceps, says: "When the head is placed in any one of these situations, and the symptoms require it, we feel ourselves warranted in attempting to deliver by the short forceps—provided the os uteri be fully dilated—if we can feel an ear distinctly—if there is sufficient space in the bony passages for the head to emerge—and if the soft parts are sufficiently dilated to admit of its exit without suffering serious injury." And again: "If there exists a well-grounded fear that the uterus may injure itself by the violence of its own expulsive efforts, in such a case, provided the os uteri is completely, or almost fully opened, with the vagina and perinæum sufficiently distensible, delivery may often be accomplished by the long forceps." Dr. Keating, the editor of the Am. edition, says: "Under no circumstances should the forceps be inserted within the os uteri; their application should be delayed until the circle of the os has risen above the parietal protuberances." Churchill says: "I do not speak of the difficulty of the forceps when the os is rigid, because it should never be attempted."

Blundell, enumerating a horrible catalogue of errors to guard against, says: "You may try to use it when the parts are rigid, and the os not fully expanded."

Rigby fairly gives reasons for his opinions, insufficient as they seem to be. He says: "In applying the forceps there are two indications which, *cæteris paribus*, are requisite in every case; first, that the os uteri shall be fully dilated; * * * as it will be very difficult and frequently quite impossible to pass the blades between the head and os uteri when only partly dilated; it will be very difficult to avoid injuring its edge more or less, and if we do succeed in applying and locking the forceps, on making an extractive effort, we shall find that the uterus descends with the head as we draw it down."

I dare to oppose these teachings because they are theoretical, established upon no successful practice; secondly, because the theory is founded upon the belief that the corpus uteri and the cervix uteri are the same organ; thirdly, I know from actual, personal, practical experience that the rules laid down by the magnates are not without exceptions. I therefore, while asserting that the occasions for operations within an undilated os uteri are rarely—*very rarely required*, yet claim that they be considered as feasible and worthy of confident resort in times of great emergency.

In the hæmorrhages of abortion, operations have been considered proper, Dewees having proposed a hook for the removal of the embryo

and placenta. I have several times removed a three or four months' placenta by *twisting it off with polypus forceps from its uterine attachment*, and delivering it through a rigid os, which had barely allowed, with great pressure, the small embryo to pass through it. No injury has ever resulted from this operation, and I am confident that life has been saved by thus stopping an apparently fatal hæmorrhage.

When the head has descended into the pelvic cavity, so that the finger may pass into the os, it may be somewhat dilated by sweeping the finger around and within with some steady pressure upon it. This irritation will also excite flagging uterine pains, particularly if the finger be passed as high up as possible, so as to reach beyond the cervix, where the nerves are sparsely distributed, to the base of the uterus proper. This mode of procedure I have practised for many years, and supposed it a personal experience of my own, as it is not generally counselled in the writings of obstetricians, although recommended by Puzos, and endorsed by Velpeau, Burns, Hamilton of Edinburgh, etc. Within the last few months, Professor Miller, of Louisville, in his recent work, advises such procedure.

This is of more evident value in those cases characterized by a long anterior lip, where the head has come well down into the sacral cavity, but its flexion and further progress is impeded by this extended anterior lip, which is so thin as not unfrequently to be supposed to be the membranes applied closely over the head, or even the scalp itself, when I have known propositions for the application of forceps to have been made by practitioners of forty years' experience.

Irritation of the os and cervix uteri as a provocative of uterine action, I therefore would strongly urge upon practitioners of midwifery as a proper and feasible operation, and particularly upon those who are in the habit of giving ergot under such circumstances. I am confident that I cannot recommend a practice so deleterious as ergot giving.

Gentlemen, I thank you for the attention which you have given to me. The practice of midwifery has so long been considered merely as an art, that its scientific aspects have been overlooked. May I trust that a learned Academy will not pass, without careful examination, any conscientiously made statement, although it may conflict with the prejudices or even carefully-formed opinions of the learned and the wise?

Selections from Favorite Prescriptions of Living American Practitioners. By HORACE GREEN, M.D., &c.

(CONTINUED.)

Emmenagogues.

All those means or agents, whether external or internal, which possess the power of stimulating the generative organs, and of causing a determination of blood to the uterus, are considered emmenagogues.

In therapeutics the term is restricted to those medicinal agents which "have the property of promoting or restoring the menstrual discharge."

Before employing emmenagogues we should carefully investigate the causes which tend to obstruct menstruation, that our efforts to remove these causes may be intelligently directed. Suppression, or absence of this discharge, is generally dependent upon some abnormal conditions of the system; or, the irregularity may be the effect of debility or of some organic disease of the generative organs; therefore, the remedies which are to be employed must have reference to these varied causes.

When the suppression of this discharge is dependent upon general debility, tonics are the appropriate remedies; and of these, bark and the preparations of steel are the most efficacious. Occurring in persons of a full and plethoric habit, venesection or other antiphlogistic measures may be required. Under other circumstances and conditions, again, amenorrhœa may be successfully treated with active purgatives, or with stimulating diuretics; and sometimes antispasmodics are the means indicated. Hence no single remedy, nor only one plan of treatment, can be adopted as being applicable to all cases.

The subjoined medicinal agents belong to that class of remedies which experience has proved to be the most efficient in promoting the menstrual discharge:

R.—Ferri sulphatis,	3iss.
Potass. iodid.,	3ij.
Tinct. cardamom.,	
Syr. symp., aa.,	f. 3j.
Aquæ font.,	f. 3ij.

M.—Fiat mist. cujus capiat cochl. parv. ter in die.

In cases of suspended menstruation, attended with headache, and with pains in the pelvic regions, the above preparation may be advantageously administered.

In chlorotic amenorrhœa attended with debility, other ferruginous preparations are often very serviceable, particularly when combined with vegetable tonics.

R.—Ferri carb., 3ij.
 Tinct. columbæ,
 Syr. zingiberi, aa., f. 3ij.

M.—Fiat mistura capiat cochleare parv. mane ac nocte. Vel:

R.—Ferri citrat., 3ij.
 Syrupi Aurantii,
 Aquæ menth. pip., aa., f. 3ij.
 Aquæ puræ, f. 3iv.

M.—Fiat mistura, de quâ sumatur cochl. parv. bis terve in die.

“There is one formula,” writes Dr. John Ware, “I have used for many years in chlorosis, and think it the most satisfactory remedy in this disease which I have ever employed. I mean for cases of young girls with pale catamenia, pale cheeks, pale lips—in short, paleness everywhere; with thin, transparent alabaster fingers and ears, short breath, palpitating throbbings in head, bruit du diable, etc., etc. Ecce signum.

R.—Aloës,
 Ferri sulph., aa., gr. xvi.
 Hydrarg. chlorid. mitis, gr. iv.

M.—Fiat massa et in pil. xvi. div.

“Taken twice or thrice a day; the quantity of aloës to be varied according to the state of the bowels, which are best kept moderately relaxed—at least two stools a day, if this can be borne. The quantity of calomel also to be varied, if necessary, and the mouth carefully watched.

“I know of hardly any combination in medicine so sure of doing its duty.”

When we have reason to suspect the obstruction to depend upon a rheumatic condition of the womb, the greatest benefit may be anticipated from the exhibition of the following combination:

R.—Potass. iodid., 3ij.
 Vini colch., f. 3iss.
 Syrupi sarsæ.,
 Aquæ font., aa., f. 3ij.

M.—Fiat mistura, de quâ capiat cochl. parv. ter de die.

In connection with any of the preceding emmenagogue preparations the following pills may be taken, should a laxative be indicated:

R.—Aloës pulv., 3iss.
 Ferri sulphatis, ʒij.
 Myrrhæ pulv., 3ij.

M.—Fiat massa, in pil. xl. divide; quarum sumat. j.—ij. bis quotidie.

In difficult and painful menstruation, attended with a torpid condition of the bowels, the following is a useful remedy:

R.—Decoc. aloës comp., ℥ij.
 Sodæ sub-boratis, ℥j.
 Tr. aloës comp.,
 Tinct. castori, aa., f. ʒss.
 Aquæ cinnam., f. ʒij.

M.—Fiat mistura, capiat cochl. amplum ter in die.

In those cases of dysmenorrhœa which are dependent on rheumatic irritation of the os and cervix uteri, Prof. Davis is accustomed to employ, with great advantage, the following combination:

R.—Vini colchici sem., ℥j.
 Tinct. stramonii, f. ʒss.
 Tinct. cimicif. racemosæ, f. ʒiss.

M.—Fiat mistura.

“Administered during the interval, between two or more menstrual periods,” says Dr. Davis, “in doses of from half a drachm to a drachm, three times a day, it will often completely cure in the above cases.”

After other remedies have failed, we have employed successfully the following mixture for the treatment of suppressed menstruation:

R.—Proto-iodid. hydrarg., gr. iij.
 Potass. iodid., ℥ij.
 Tinct. gentianæ, f. ʒij.
 Aquæ cinnam., f. ʒij.
 Syr. simp., f. ʒj.

M.—Fiat mistura, ejus capiat cochl. parv. bis terve in die.

The emmenagogue recommended and employed by Dr. Dewees, has been for many years, among American practitioners, one of the most popular of all remedies for the treatment of suppressed catamenia.

The following are the directions as given by Dr. Dewees:*

R.—Guaiacaci pulv., ʒiv.
 Sodæ carb., vel potass, ʒiss.
 Pimentæ pulv., ʒj.
 Alcohol. officin., Oj.

Macera.

Dr. Dewees directs, that the volatile spirits of ammonia be added to the above mixture, after it has digested for a few days, in proportion of one or two drachms to each four ounces of the tincture; and given in doses of a teaspoonful three times a day in a glassful of sweetened milk, or wine.

“I have,” adds he, “for more than forty years, almost daily used this medicine in suppressed catamenia, and more especially in those of long standing, without its having failed in any case proper for its use.”

Gargles and Lotions.

Gargles and lotions may, with propriety, be arranged together, for

* Treatment on Diseases of Females, pp. 123-4.

both are medicated, local baths; the former being employed as washes for the mouth and fauces, whilst lotions are used as washes externally, and for injections.

In affections of the mucous membrane of the mouth and throat, gargles are only serviceable when the disease is limited to the fauces and pharynx; when it has extended into the larynx, or even into the subtonsillary fossæ, these parts are not reached by lotions employed as gargles.

As a gargle in inflammatory sore throat, and in the early stage of follicular disease of the throat, we have been accustomed to employ the following:

R.—Argent. nitratis,	℥j.
Aquæ rosæ,	f. ℥iv.

M.—Fiat gargarisma.

The subjoined may also be used under the same circumstances:

R.—Potassæ nitratis,	℥ij.
Mellis rosæ,	℥j
Aquæ rosæ,	f. ℥v.

M.—Fiat gargarisma sæpe utendum.

In chronic inflammation of the throat, and in the later stage of follicular disease of the pharyngo-laryngeal membrane, we have often derived great benefit from the frequent use of the following creosote gargle:

R.—Creosoti,	gtt. xxiv.
Tinct. myrrhæ,	
Tinct. lavendul., co., aa.	f. ℥ss.
Syrupi simp.,	f. ℥j.
Aquæ font.,	f. ℥vi.

M.—Fiat gargarisma.

Or the following:

R.—Creosoti,	gtt. xx.
Tinct. capsici,	f. ℥ij.
Tinct. myrrhæ,	
Tinct. lavendul., co., aa.	f. ℥ss.
Syrupi simp.,	℥j.
Aquæ font.,	f. ℥vi.

M.—Fiat gargarisma.

In aphthous affections of the throat, the following is an excellent gargle:

R.—Decoc. hordii,	℥vj.
Mel. rosæ,	℥j.
Tinct. opii,	f. ℥iss.
Tinct. myrrhæ,	f. ℥vi.

M.—Fiat garg.

Or the following, which has been highly recommended in ulcerated sore throat, may be used:

R.—Liquor. calcis chloridi,	f. ℥ss.
Mellis rosæ,	℥j.
Aquæ font.,	f. ℥vss.

M.—Fiat gargarisma.

As a most excellent detergent lotion in venereal ulcerations of the throat and fauces, the following may be frequently employed:

R.—Hydrarg. chlorid. corrosiv.,	gr. iij.
Solve in spirit. vin. rect.,	℥ss.
et adde decoct. cinchon.,	f. ℥vj.
Tinct. myrrhæ,	f. ℥iv.
Mellis rosæ,	℥iss.

M.—Fiat gargarisma.

Young children, when affected with inflammatory sore throat, or in aphthous affections of the throat, are often much relieved by using frequently a mild wash; the following may be employed:

R.—Infus. rosæ,	℥vj.
Tinct. myrrhæ,	f. ℥ss.
Mellis commun.,	℥j.

M.—Fiat gargarisma.

Or the following may be substituted when a more stimulating gargle is required:

R.—Tinct. capsici,	f. ℥j.
Aluminis,	℥j.
Mellis commun.,	℥j.
Aquæ puræ,	f. ℥ivss.

Misce, pro gargarism.

In chronic sore throat, attended with relaxation of the uvula, the following astringent gargle is frequently employed:

R.—Decocti quercus,	℥vij.
Aluminis,	℥ss.
Vini gallici,	f. ℥j.

M.—Fiat gargarisma.

The above is also a useful injection in leucorrhœa, or in ulceration of the rectum or vagina.

As a vaginal injection in leucorrhœa, the following lotion has been found excellent:

R.—Liquor. alumin. co.,	
Aquæ font., aa.	f. ℥vj.

M.—Fiat injectio.

In the treatment of old and indolent ulcers, particularly ulcers of the leg, we have employed, for many years, the following stimulating and sedative lotion:

R.—Calcis chloridi,	3j.
Opīi pulv.,	3iss.
Aquæ font.,	f. 3vj.

M.—Fiat lotio et cola.

By applying constantly pledgets of lint, wet with the above wash, to old and troublesome ulcers, they have been healed, frequently, after other applications have failed. In the treatment of chancre, also, after cauterizing the ulcer, it is the most efficacious remedy that can be employed. Frequently applied by means of the lint, it soon changes the character of the sore, and arrests the ulcerative process. The employment of constitutional remedies, however, should not be omitted.

Antacids and Antilithics.

Those substances which are capable of combining chemically with the free acid that is often found to exist in the stomach and primæ viæ, and of neutralizing it, are denominated antacids. By combining with the acid of the stomach and digestive organs, a new innoxious compound is formed, and thus a temporary palliative effect is produced, relieving the symptoms caused by the presence of a morbid acidity. The employment of antacids, however, does not serve to correct, permanently, that peculiar state of the digestive organs which favors the formation of acids. Their favorable action is only temporary; their protracted use not infrequently serves to debilitate the powers of the stomach, and, therefore, "in no case should their administration be long persisted in without occasional interruptions."

Where the acid exists in the stomach and the upper portion of the intestinal canal, alkalies of the volatile kind, as ammonia and its carbonate, or the preparations of magnesia or of lime, should be preferred. If the acid exists in the urinary organs, those alkalies which have a tendency to act more directly on the kidneys, as the preparations of potash, magnesia and its salts, should be employed.

In cases of headache arising from acidity of the stomach and primæ viæ, the subjoined has been most efficacious in many instances:

R.—Sp. ammon. aromat.,	f. 3vj.
Sodæ bi-carb.,	3iss.
Infus. cascarillæ,	f. 3viiss.

M.—Fiat mistura, cujus capiat cochl. ampl. ij. bis in die, ante cibum.

In gastrodynia, and in other gastric and intestinal disturbances, the following is an elegant and invaluable mixture:

R.—Sodæ subcarb.,	℥iss.
Aquæ puræ,	Oj.
Acidi sulph. dilut.,	f. ʒj.
Confectionis aromat.,	
Aquæ menth. pip., aa.,	f. ʒss.

M.—Fiat mistura, cap. cochl. ij. mag. bis in die.

Or the following:

R.—Liquor. calcis.,	f. ʒviiss.
Magnesiæ calcin.,	℥ss.
Spirit. ammon. aromat.,	f. ʒij.
Tinct. card. comp.,	f. ʒj.

M.—Sumat. cochl. ij. larga bis die, vel sæpius.

In heartburn and other cases of acidity of the stomach and primæ viæ, the carminative mixture first recommended by Dr. Meigs, is much employed, and often with great advantage:

R.—Magnesiæ carb.,	℥ss.
Magnesiæ sulph.,	℥iiss.
Sp. ammon. aromat.,	f. ʒj.
Tinct. rhei,	f. ʒss.
Tinct. hyos.,	f. ʒss.
Aquæ menth.,	f. ʒiv.

M.—Fiat mistura, cujus sumat cochl. unam mag. bis terve in die.

In chronic diarrhœa depending on a redundancy of acid in the stomach and intestines, the following will be found useful:

R.—Mistur. cretæ,	f. ʒvj.
Spirit. cinnam.,	f. ʒiss.
Aquæ ammon.,	f. ʒiss.
Tinct. opii,	gtt. l.

M.—Fiat mist. sumat cochl. j. or ij. ampl., pro re natâ.

The carminative mixture of Dr. Dewees has been extensively employed in this country in acidity, flatulent colic, diarrhœa, etc., of young children. It is an excellent remedy:

R.—Magnes. carb.,	ʒj.
Tinct. assafœtidæ,	f. ʒss.
Tinct. opii,	gtt. xl.
Sach. alb.,	ʒij.
Aquæ puræ,	f. ʒij.

M.—Fiat mistura, date m. xx. vel xxx., pro re natâ.

My colleague, Prof. Davis, highly recommends, under the same circumstances, the following:

R.—Cretæ prep.,	
Sach. alb., aa.,	ʒj.
Acaciæ pulv.,	ʒij.
Aquæ cinnam.,	f. ʒiv.

M.—Sumat. cochl. parv. bis terve in die.

In the treatment of the lithic acid diathesis, the alkaline bi-carbonates are the appropriate remedies. Their exhibition should be preceded or accompanied by counter-irritation over the lumbar region, and, if indicated, active purgation.

R.—Aquaë ammon. carbonatis, f. $\frac{3}{4}$ j.
 Infus. gentianæ co., f. $\frac{3}{4}$ v.
 Sp. ætherei nitrosi, f. $\frac{3}{4}$ ss.
 Aq. cinnam., f. $\frac{3}{4}$ iss.

M.—Fiat mistura, de quâ sumat. cochl. j. vel ij., ampl. ter in die.

In those cases where the urine indicates the presence of lithic acid, the above mixture may be employed with advantage. Or the following:

R.—Liquor potassæ, f. $\frac{3}{4}$ ss.
 Tinct. humuli, f. $\frac{3}{4}$ iss.
 Infusi columbæ, f. $\frac{3}{4}$ iv.
 Syr. aurantiæ, f. $\frac{3}{4}$ j.

M.—Fiat mistura, capiat cochl. larga unam bis terve in die.

In the arthritic or rheumatic diathesis, in which a tendency to the morbid formation of lactic acid may exist, we have employed advantageously the following:

R.—Potassæ iodid., $\frac{3}{4}$ ij.
 Liquor. potass., f. $\frac{3}{4}$ iss.
 Tinct. colchici, f. $\frac{3}{4}$ j.
 Tinct. cardamomi, f. $\frac{3}{4}$ j.
 Syr. Sarsa., f. $\frac{3}{4}$ iv.

M.—Fiat mistura, cujus capiat cochl. parv. ter in die.

The *Potassio-Tartrate of Soda*, in combination with the wine of colchicum and an anodyne, is the great remedy on which Dr. Fuller, of St. George's Hospital, London, depends, in the treatment of acute rheumatic affections. He administers these remedies in a simple saline or a nitre draught, as the following:

R.—Haustus salini, f. $\frac{3}{4}$ iss.
 Sodæ potassio tartratis, $\frac{3}{4}$ j.
 Vini colchici, gtt. xv.
 Tinct. opii, gtt. vij.

M.—Fiat haustus.

"This draught is repeated," says Dr. Fuller, "for the first twelve or twenty-four hours, at intervals of three or four hours, according to the strength of the patient and the severity of the attack." *

* Dr. H. W. Fuller, "On Rheumatism, Rheumatic Gout," etc., p. 99.

Puerperal Fever; An Abstract of the Discussion at the Paris Academy of Medicine. Collated from the French Journals for the MONTHLY.

M. Cruvelhier.—I shall speak only of *classical* puerperal fever; that is to say, of the fever of lying-in women, and not of that fever which I shall call *analogical*, and which has been so well described by our spiritual colleague, M. Trousseau. My intention is only to exhibit the facts I witnessed during the two years and a half I was attached to the service of the Maternité.

The first result of my practice at that hospital was, that there existed for the diseases which prevail there, *benign periods*, during which the cases of puerperal fever yield with the greatest facility and *periods of malignancy*, during which they are of the severest character, and resist generally all kinds of treatment. The benign periods, however, answer to the time when the lying-in asylum has the least number of inmates; that is to say, during summer.

During these periods, the symptoms consisted of a more or less severe pain in the hypogastrium, accompanied by a considerable increase in volume, and especially in consistence of the uterine globe. This pain was sometimes confined to the hypogastric region; sometimes it extended beyond it. In the first there was metritis; in the second, metritis with partial peritonitis. A slight antiphlogistic treatment was sufficient for subduing these symptoms. Other facts gave me reason to believe that there was also, in certain cases, uterine phlebitis, which was kept in a state of obliterating or adhesive phlebitis by a prompt antiphlogistic treatment.

But during the winter of 1830–31, when the Maternité was crowded, the epidemic, puerperal fever, appeared with all the characteristics of malignancy. At the debut, chill, of which the intensity, duration, and especially the early appearance, was generally a measure of the gravity of the disease; abdominal peritoneal pain, a serious alteration of the countenance, smallness and extreme frequency of the pulse.

Relative to the therapeutics of this disease, I can say, that in the course of the five epidemics I have witnessed, I have tried every method of treatment, both rational and empirical, and all have equally failed.

The form and the severity of these symptoms lead me to give to the epidemic, puerperal fever of the Maternité, the name of *puerperal typhus*. In fact, I regard this fever as well as typhus, as a disease by infection, a miasmatic disease, resulting from a crowded condition of the asylum. I regard the fact of puerperal fever being limited to the vicinity of the Maternité as sustaining this view.

When, then, epidemic puerperal fever or puerperal typhus breaks out in a lying-in asylum, there is only one course to take—to evacuate the hospital and put the key under the door.

What conclusion do we draw from this, gentlemen? That it is necessary to suppress lying-in asylums and replace them by visits at home? M. Depaul has already said that this would be the best plan; or if such asylums are preserved, they should be so organized that the lying-in women should be in such conditions of salubrity that the miasmatic contagion could not reach them. The confinement of each woman by herself, in an especial chamber, would be the first of these conditions.

Now, what do we find at the autopsy of women who have died of puerperal fever? A uniformity of lesion, which is explained by the identical conditions in which the recently delivered are placed. The most frequent and the most serious of these lesions is, without doubt, peritonitis. But this puerperal peritonitis is always, or almost always purulent; sometimes at the same time pseudo-membranous and purulent; rarely pseudo-membranous alone.

Pseudo-membranous peritonitis is often partial or circumscribed to the hypogastric region. I am not acquainted with a single example of partial peritonitis; at least, with anterior adhesions.

The dominant characteristic of puerperal phlegmasias is the tendency to a rapid and abundant purulence.

As an annexation to puerperal peritonitis, I will place the diffuse inflammation of the sub-peritoneal cellular tissue, which I have seen to extend sometimes to the region of the kidney.

The ovaries and the fallopian tubes often participate in the puerperal morbid process. The cavity of these ducts is often filled by pus, and as there is nothing to prevent this morbid liquid from falling into the peritoneal cavity, the inquiry is always suggested whether, in a certain number of cases, the peritonitis is not the result of this effusion.

Purulent lymphangitis is the most remarkable characteristic of puerperal typhus. In an anatomical point of view, it is its special mark. M. Cruvelhier has never found this lesion in ordinary peritonitis, nor in any other inflammation. The presence of pus is incomparably rarer, as the consequent of delivery, in the uterine veins than in the lymphatic vessels. Great care should be taken not to confound the purulent veins with the lymphatic vessels which suppurate. This mistake has often been made, which will explain the differences in opinion.

The ganglions to which the purulent lymphatics go are generally injected with pus. It is still doubtful whether they can offer an im-

passable barrier to the morbid fluid, and so prevent it from mixing with the venous blood.

Can suppurative inflammation of the lymphatic vessels be cured? M. Cruvelhier does not peremptorily answer this question. He is satisfied by saying that in women who have escaped from the primitive puerperal symptoms, and who have afterwards died of some other affection, semi-concrete pus has been found in those points which are ordinarily the seat of lymphatic purulence of the uterus.

Besides the alterations which have just been described, and which are the most serious and the most frequent, we also find in puerperal fever suppurative uterine phlebitis, purulent pleurisies often double, lobular pneumonias, puerperal rheumatism, which also tends to suppuration, and finally gangrene of the uterus.

Such is summarily the pathological anatomy of puerperal fever. In the presence of inflammations so extensive, is not the question whether puerperal fever is a primitive and essential, or a symptomatic fever already settled? The following is what I believe relative to this point:

Puerperal fever is at the same time a fever and a phlegmasia, the consequences of a common cause—miasmatic infection. I see no objection in calling by the generic name of fever all the local diseases accompanied by febrile reaction. Let us continue, then, to give the name of puerperal fever to the fever of the recently delivered; but do not let us forget, that generally the local inflammations graduate the severity of the disease.

What is the nature of puerperal fever? I do not speak, be it understood, of its intimate nature, of its essence, but of the proper place to assign it in the nosological table. In this point of view, it seems to me that puerperal fever should be considered as the *traumatic fever* of the recently delivered.

In fact, the woman who has just been delivered can be compared to a person who has just undergone a severe surgical operation. In both nervous exhaustion, emotions of all kinds, severe and prolonged pains, open vessels, more or less abundant hæmorrhages, an extensive solution of continuity from whence necessarily results a traumatic fever, which, in lying-in women, is called *milk fever*, because, in virtue of laws easy to perceive in their result, but impossible to perceive in their means, it is accompanied by a secretion of milk in the breasts; such is the regular condition. Let us follow out the parallel, and we will find that the same causes of death operate both for the lying-in woman and for the individual operated upon, or the severely wound-

ed, as hæmorrhages, either primary or consecutive, convulsions, severe inflammations, gangrene, erratic erysipelas, suppurative phlebitis, and purulent infection, finally suppurative lymphangitis, which frequently takes place in the recently delivered, but rarely in persons suffering from extensive wounds.

Such is the result of the comparative observations which I have made at the Hôtel Dieu, in the service of Dupuytren, and in my own service at the Maternité, from which I draw the following conclusions:

1. Puerperal fever is essentially a traumatic fever.
2. The particular conditions in which the uterus and the whole organism of the woman who has been recently delivered, is placed, constitutes what may be called *puerperal traumatism*.
3. Epidemic and contagious puerperal fever, recognizing overcrowding as its principal cause, deserves the name of *puerperal typhus*.
4. The essential anatomical characters of puerperal typhus, are peritonitis, sub-peritonitis, and purulent lymphangitis. Purulent uterine phlebitis is incomparably rarer than suppurative lymphangitis.
5. It is highly probable that purulent inflammation of the lymphatic vessels is a cause of the intoxication of the blood in puerperal typhus; but this intoxication does not ordinarily show itself by visceral abscesses, as in purulent phlebitis.
6. The possibility of purulent infection of the blood by suppurative lymphangitis is not positively decided.

I hope I may be permitted, in closing, to express a wish, which I am sure will find an echo throughout the whole profession, that this discussion will not be sterile in its results. If some differences among us still remain as to the dogmatic interpretation of some of the morbid elements which compose puerperal fever, none can exist upon the fundamental fact of the eminently contagious and miasmatic character of puerperal fever in lying-in asylums. It cannot be expected that the rate of mortality of these houses will be diminished as long as these things remain in the state in which they now are.

There is only one course to take, the suppression of large lying-in asylums; their place being supplied by medical aid rendered at the homes of the lying-in women, to which can be added a certain number of small hospitals situated without the city, capable of receiving twelve, fifteen or twenty patients, in which each patient would have a room to herself.

I propose to the Academy to submit this serious question to the section on hygiene, to which may be added those of our colleagues who have made the diseases of lying-in women a particular study.

The report of this commission will be submitted to the Academy, and, after discussion, sent to the proper authority, who, I am convinced, will do justice to a reclamation so legitimate, and sustained by the whole Academy.

J. H. D.

On the Detection of Phosphorus in Medico-Legal Investigations. By Prof. E. DELARUE.

Prof. D. was charged with the chemical examination of the body of a man who was supposed to have been poisoned by the use of phosphorus. In spite of the employment of various modes of examination, he failed to detect the presence of the metalloid, and no evidence of a positive kind was obtained which would enable him to affirm that the man had been poisoned by phosphorus. It then occurred to him that he might be able to detect some metallic substances, such as are used to color the tips of friction matches, in which case he would be placed on the road towards the detection of phosphorus itself.

He submitted a very small part of the stomach (having been previously washed several times in distilled water) to combustion by means of sulphuric acid and the ordinary means, when suddenly, to his surprise, the carbonaceous mass was covered with brilliant sparks, which burned at the side of the capsule with all the characteristics shown by phosphorus when burning in the air. The operation was repeated several times, and in the presence of different persons, with the same result.

In another case examined by the same chemist; the intestines of a child four years old were offered for examination, under the impression that it had been poisoned by phosphorus. After a number of examinations, he failed to detect the presence of any toxic substance. Wishing, however, to test the validity of his operations, he submitted a very small portion of the stomach to combustion with sulphuric acid, having previously mixed with it the material dissolved from 20 matches (the manufacturers of Dijon use 30 grammes to 155,200 matches, consequently there was a little less than 0.004 of phosphorus in the 20 matches); yet this slight quantity gave all the phenomena of the combustion of phosphorus very distinctly, just as had been obtained in the previous case.

This method is very simple, and yet so exact that our toxicologists should keep it in mind, if their services should be needed in a case of phosphorous poisoning. Mons. Chevallier promises to furnish a report on the subject in a future number of his journal.

L. H. S.

The Detection of Alum in Bread.

There are several modes of detecting the presence of alum in bread. The first consists in soaking the bread in water, and then treating the filtered solution thus obtained with ammonia. The alumina is then precipitated, but always mixed with more or less of the phosphates, which become insoluble under such circumstances. On this account it is not proper to employ the weight of the precipitate as the indication of the amount of alum employed in the adulteration, and for this reason this mode of determination cannot be depended on.

Another mode of determination consists in incinerating the organic material, and seeking in the saline residuum the presence of alum. This, although leading to exact results, has the inconvenience of requiring too much time.

Dingler proposes a more expeditious method than either of these, based upon the peculiar discoloration which a solution of logwood undergoes in the presence of alum. It is only necessary to boil the suspected bread or flour in a dilute solution of logwood, when, if there is an adulteration with alum, the decoction will assume a quite characteristic red color. This reaction is very delicate, and enables a skillful operator to detect a nine-hundredth of alum. It is recommended by the author that the solution be dilute and freshly prepared in order to ensure success.—(*Polytech. Journal.*)

L. H. S.

Tincture of Urtica in Burns and Scalds.

In the October (1857) number of the *Jour. de Chim. Med.*, it was noticed that burns were rapidly healed in America by the employment of the tincture of the small stinging nettle, (*Urtica Urens*), which was prepared by infusing for some days in alcohol the plants cut into small pieces, and was applied by means of a saturated linen cloth to the burn, which then cicatrized rapidly. Justin Lukomski, a Russian practitioner, of the village of Bechui, in the Crimea, gives an interesting account of his employment of the tincture of the *Urtica dioica* in such a case. We transfer it to the pages of the MONTHLY as an account of an additional agent belonging to our own indigenous botany.

An infant had been left in care of a little girl ten years of age, during the absence of the mother. The girl laid the infant near the fire, (which the Tartars, not having stoves, make in their houses generally on the ground, under the chimney,) and was absent for a few minutes. The absence was sufficiently long for the child to place one of its feet

upon the burning coals, and to receive a severe burn; and being too young to be able to move away, might have paid the penalty of its life for the imprudence of the mother and the girl, to whose charge she had been confided, if the latter had not rushed to her assistance on hearing the screaming. The toes, and a portion of the upper surface of the foot, had suffered most from the action of the fire; the epidermis had been nearly entirely removed; the exposed subjacent parts were much tumefied, in part, even disorganized, and very painful, so that the least touch would cause the child to scream. The rest of the foot was also swollen, red, and painful. Along the leg there were also some spots, red, swollen and painful, and a blister a little below the knee.

Happening to have at hand a tincture of *Urtica dioica* prepared of the fresh plant, he determined to employ it. Fearing, however, lest the application of alcohol to parts denuded of the skin might cause too much pain and increase the inflammation, he diluted a certain quantity of the tincture with double its volume of water. This mixture was shaken for some time in a bottle, and a linen rag being saturated with it, was placed on the injured parts. The rag was ordered to be moistened three or four times a day with the diluted tincture without removing it, in order to give less pain to the infant. Two days after, the mother called on him again, begging him to give her some more of the tincture, and saying that the injured foot was already nearly cured; that there was no more tumefaction or redness, and that the denuded portions had begun to cicatrize. The affected parts in general were only slightly painful. As she had no more of the tincture, she covered the affected parts with hemp-seed oil, which, however, had produced some irritation, and was bringing back the redness, and even the pain. On examining the infant, he found that, notwithstanding the ill effects attributed by the mother to the hemp-seed oil, everything looked much better than when the child had been first seen by him. The dilute tincture was again employed. Four days afterwards the child had perfectly recovered; the nails had fallen off, but the burns had nearly entirely cicatrized; and in a short time afterwards but slight traces remained.

A cure so rapid, of a severe burn that would have required, by the means ordinarily employed, at least three times as much time, is well calculated to satisfy any one of the utility of the alcoholic tincture of the *Urtica* in the treatment of burns.

L. H. S.

The Preparation of Curare.

M. Er. Baudrimont, in the May (1858) No. of the *Jour. de Chim. Med.*, furnishes a short but exceedingly interesting account of the preparation of this substance, which proves its source to be animal and not vegetable, as it has heretofore been supposed. The paper recommends itself to the perusal of all who are curious on the subject of poisons, and who would know how skilled the Brazilian Indians are in the preparation of lethal agents.

Curare is one of those mysterious and terrible poisons whose action is quickly fatal when it is mingled with the blood in the circulation, but which, on the other hand, is innocuous when it enters the system from the stomach. The mode of its action rendering it altogether comparable with that of the poison of the most formidable serpents, seems to contradict all scientific notions of the present day, when we recollect that this substance, prepared with so much care by the Indians of South America, is considered as the juice of one or more plants of the genus *Strychnos*, (*S. toxifera*, and *S. guianensis*.) But all known and tried vegetable poisons act as well through the digestive organs as by inoculation—curare being the only exception!—an exception which is inexplicable, from a point of view recognizing its origin as vegetable, or from a chemical consideration of the subject, unless the existence of the alkaloid, *curarine*, is admitted. We have been delighted to collect recently some novel information on the preparation of curare; and it has appeared sufficiently interesting and curious to desire to make it public, as it enables us to comprehend the *modus operandi* of this redoubtable poison.

According to Humbolt, the Indians on the banks of the Orinoco prepare this substance from the bark of a plant called *vejucu de macarure*. The bark being detached from the stem, is scraped, bruised and crushed, so that the juice may be extracted by the Indians, filtered, and then concentrated by heat. When the liquid has attained a syrupy consistence, there is added to it another vegetable juice which is very glutinous, and is called *kiracaguero*, which is not poisonous, but which serves to give the curare its proper consistence. In this condition it is employed by the Indians to spread on the extremities of their hunting or war arrows.

To these facts, collected by Humbolt, exhibiting curare as a veritable vegetable extract, Mons. Goudot has lately added some new information; and, according to him, the savages of Messaya add to the juice of the plant a few drops of the poison obtained from the poison bags of the most venomous serpents. But the preparation of curare,

as communicated to us by one of our pupils, M. Terral, and obtained by him from different persons, all very reliable, who had lived among the Indian tribes of Brazil, is as follows:

Those who are about to prepare the curare select a large animal having firm and tough flesh, such as the horse or buffalo. After having killed it, they suspend it at a place known to be frequented by the different species of the *Crotalus*, which breed in those regions. The inoffensive prey is abandoned to these terrible enemies; the crotali approach and repeatedly exercise their useless bites and powerless rage on the prey which is suspended, and much too large for them. After three or four days delay, during which the flesh has had time to be infected by the formidable venom of hideous reptiles, the Indians come for and carry it away in vessels, where they permit it to enter into complete putrefaction; and then, when this infected mass is reduced to a pulp, they squeeze into it the juice of the *vejuco de macarure*, taken at the time of blooming, because they consider it then as most active; and mixing the whole with the assistance of sticks, they thence express at length from this pulpy mass a concentrated liquor, of which they fill the little gourds that are always suspended from their waists.

With this preparation they cover the arrow points either by plunging them rapidly in the liquid at the time they wish to use them, or by fixing it on with the assistance of some viscid substance which will cause it to adhere, as when it is necessary to prepare the poisoned arms beforehand.

Such is the information that we have received, and if the preparation be truly thus made, it will then be possible to explain the characteristic and special action of this frightful substance; furthermore, it will give us a high estimate of the murderous conceits and of the knowledge of those savages, who, accumulating one after the other, vegetable poison, the virus of putrefaction and the venom of serpents, excel in one stroke the deadly science of Locusta and Brinvilliers, by concentrating, in the same product, every most horrible thing in the shape of a poison that one could dream of.

L. H. S.

Vaccination as a Protection. (From Jour. de Chim. et de Pharm.)

Vaccination may be considered as the greatest gift in the possession of medicine. That it has met those who have opposed it from the time of its origin, was simply the fate of all great discoveries; but that after a half century of decisive experiments for the masses, always

slow in acknowledging progress, there should be found men of a certain scientific reputation and of a conviction sufficiently deep to undertake, in the name of reason, experience and statistics, a crusade against vaccination, this is noted with astonishment and grief by almost all physicians; but, fortunately, without uneasiness for so just a cause. It is very well known that inoculation, made in a suitable way, before the discovery of vaccination, was then a grand protection, to which we would be happy to return if vaccination should lose its power; but, fortunately, it appears that there are more chances for the exhaustion of the variolous virus than of the vaccinal virus.

It has been repeated as a species of gossip, that variola is a necessary means of depurating the blood; that the consequence of its suppression has been the development of new diseases more terrible even than itself, among which croup, uterine diseases, typhoid fever, &c., have been named; by an erroneous interpretation of statistics, it has been added that vaccination has had the effect to increase definitely in Europe the figure of mortality, or at best, to displace this, and to cause youth and manhood to pay a tribute to death, which infancy formerly paid; whence, they say, a real loss to humanity.

Physicians thrown back on their proper reliance—experience—have scarcely done justice to the accusation relative to the variolous depuration of the blood. It appears, at first view, that mankind did not enjoy worse health before the invasion of variola, which is of recent origin as compared with the age of the world, than since that period; and furthermore, that there is no temporary or definite deterioration of health arising from the disease. How long is the chapter of diseases which are likely to occur during convalescence from variola, as also in the case of two other depurations, from which we should be too happy to be delivered, measles and scarlatina!

It is demonstrated historically that uterine diseases, croup, and typhoid fever are of much earlier origin than variola; as far as their relative frequency is concerned, the assertion is not more easy to establish than the denial in the want of figures; but from the manner in which the authors who have preceded us, those of the 19th century in particular, speak of typhoid fevers, known then under the names of mucous fevers, synchous, putrid and malignant fevers, they could not have been less numerous and less fatal than at present. There is in Stoll's work a statistical table of diseases observed by him and his predecessors at the Hospital of St. Trinity, in Vienna, from 1762 to 1775, which established, as regards other diseases, a percentage nearly

equal to that which Vigla finds in his attendance at the municipal maison de santé.

However, typhoid fever is so little preservative from variola—it is so little an internal variola, that we see it sometimes seize those convalescent from the disease, as every physician to a hospital has witnessed. In the department of statistics, where long, special, and hard study is required, an answer has not been delayed long by the voice of a physician very experienced and sagacious in this kind of research, Mons. Bertillon, physician to the hospital of Montmorency, who, first in the *Moniteur des hôpitaux* and the *Union Médicale*, and more recently in a work entitled *Conclusions Statistiques contre les detracteurs de la vaccine*, has perfectly sustained the title of his book.

His numerous and exact researches bring back the consoling thought that the mortality, since the practice of vaccination, not only in the infant but also in the adult, has diminished. “It is satisfactorily demonstrated,” says Bertillon, “that before the revolution there was a decrease of 55 in 1,000 children from 0 to 14 years, and that it is not greater now than from 32 to 33. For adults there was a decrease of 26 in the 1,000, and now it is not greater than 20. What place is there for doubt in the presence of results so important, decisive and satisfactory? What place is there for a contradictory hypothesis?”

There is, however, to be noticed a singular fact, which is quite contradictory, apparently, to the cause of progress, as M. Bertillon with truth calls it. If it be true that the mortality has diminished, with all ages, in the nineteenth century as compared with its predecessor—when we compare a period of this century, as, for example, that from 1817 to 1831, when the influence of vaccination, which dates only from the beginning of this century, should have been but slightly manifest, for ages between 15 and 30, with a subsequent period more favorable as regards the benefits to be expected from the new discovery, as that from 1840 to 1849, the comparison of the two periods with reference to the earlier years (from 0 to 15 years) is at first favorable to the cause of vaccination, and ceases to be so with more advanced ages, as is evident from the following table:

Numbers of deaths 10,000 of each age.

AGES.	1817—1831.	1840—1849.
15—20	67.5	70.5
20—25	108.5	134.0
25—30	87.5	108.0

“There are at this time,” says Bertillon, “134 deaths of those at ages from 20 to 25, when only 108 were counted in the first quarter of the

century; and we lose 108 lives of those in the next period, (25 to 30,) when in 1825 there were only 87 lost. It is not possible to doubt but the mortality of the young has been greater in the present period than under the restoration; and the opponents of vaccination, who have not been able to explain it, have not failed, in the spirit of the *post hoc ergo propter hoc* logic which is familiar to them, to attribute it to the influence of vaccination."

It is of the highest importance for hygiene and the State that the cause of such degeneracy should be investigated; but without touching anything but the point under consideration, it is easy to exonerate vaccination entirely by the production of the fact that, on the analysis of the tables, the increase of the mortality belongs exclusively to the male sex, the mortality of adult females having diminished or remaining nearly stationary.

We cannot follow Bertillon in his studies on this curious point of statistics, and in his enumeration of the causes which have been able to produce such a result; we confine ourselves to the principal of these, which accord with those given by such modern statisticians as Quételet, Villermé, Benoiston, and Boudin: 1st. Residence in cities; 2nd. Industrial occupation; 3rd. Life in barracks—three chief conditions of the increase of mortality in the adult period; since mortality in civil life alone has not been more than 10 in 1,000 with those from 20 to 30 years old, it is as great as from 18 to 20 in the army of the interior, especially in the early years of conscript life.

If the preceding results, relative to France, are favorable to vaccination, although there is much to be desired in other reports, its innocence is still more victoriously established by figures borrowed from a country in which the interments and their ages have been preserved with great care for a long time, and the enrolment of the population is repeated at very close intervals. We refer here to Sweden. Bertillon has calculated, from official documents, the liability to death for every age, at the three following epochs: 1755–1763, 1815–1825, 1840–1849.

About 1803 they began to vaccinate in Sweden, and by degrees it progressed so that out of 100,000 births, 80 or 90,000 are vaccinated. Thus, as Bertillon shows, by comparing the epochs indicated, the mortality at each age can be appreciated: the first belonging to the past century, before there was any influence of vaccination; the second about 1820, when the influence was exerted on infancy and not on adults; the third about 1845, when the influence was exerted on all ages, old age alone excepted.

“There were (for every 1,000 living persons at that particular age) in Sweden, *in the past century*, 289 deaths in the first year of their existence, but 210 in the first quarter of our century, and only 188 at the present time. If we look at the adult mortality, we shall see that of those from 20 to 30 years of age, we have now only 755 deaths, (for 100,000 living at that age,) instead of 855 at the beginning of the century. These figures, however, relate to the male population; but the same result, and even more striking, is found in examining the records of female mortality.

We see in Sweden, as in France, that the mortality has diminished for all ages, but in a more marked manner during the early years of life. On the other hand, although in France for 25 years this progression has been arrested for the working periods of life, and has even retrograded for the male sex, nothing of the kind has occurred in Sweden, where the mortality has even diminished during the productive ages. But by singular coincidence, *the progress of the mortality of the two sexes was arrested in Sweden*, for those, who being from 60 to 70 years of age, were born before the origin of vaccination.

Bertillon is not content with furnishing proofs of the innocence of vaccination; he has subjected the statistical documents brought against him to a searching criticism. In this contest, where our sympathies accompany him, victory seems to him certain, and we receive with acknowledgments the following conclusions furnished by him.

Vaccination, placed at the bar of accusation, has not only been exculpated, because the accusations hurled at her have vanished during the discussion, but irrefutable witnesses have also appeared to determine her innocence, and to prove that she does not give us anything but benefits. To-day we can *affirm* that vaccination, so precious to the infant, is not injurious at any age.

L. H. S.

A Case of Uterine Polypus. By SETH SHOVE, M.D., Bedford, N. Y.

On the 6th of December, 1855, I was called to Mrs. T——, of Somers, aged 51 years, and found her extremely feeble, having been exhausted by repeated uterine hæmorrhages during the last five years, which had of late gradually increased in frequency, till they now recurred every two or three weeks, when her life was brought into most imminent danger.

These hæmorrhages had been attributed by her physician, as is com-

mon in such cases, to the "turn of life," and consequently she received no other treatment than such palliatives as are usually administered in such cases.

A superficial glance detected such symptoms as convinced me that she labored under organic disease, and I proposed a more critical examination, apprising her at the same time that she had nothing to expect from medicine. She, however, declined for the present, saying if she was no better she would let me know. On the 15th of the same month I was called again, and found her prostrated by another profuse and alarming hæmorrhage. She now readily assented to an examination, which at once disclosed the cause of all her trouble. A fibrous polypus, about three inches in diameter, was found attached by a pedicle an inch in diameter, to the inner and posterior surface of the cervix uteri. For the present, I made use of such styptics as were at hand, together with mechanical pressure, proposing to see her on my return from a journey, which was arranged for the following day. Upon my return on the 5th of January, 1856, I found her in nearly a dying state from loss of blood. She called her family together and gave them the parting hand, preparatory to an operation which should have been performed years before, as the only means of relief.

On account of her extreme exhaustion, I resolved upon the ligature as the safest means, which I applied in a most careful manner, by means of Levret's double canula, and had the satisfaction to find the hæmorrhage immediately and permanently arrested.

The ligature was tightened from time to time, and on the 11th of January, seven days from the period of its application, came away by a slight effort.

Up to this date, embracing a period of now over 16 months, there has been no return of hæmorrhage, and the patient is in the enjoyment of good health.

A Case of Nævus Maternus. By SETH SHOVE, M.D., Bedford, N. Y.

I was called, January 14th, 1856, to see a female child of Rufus Clark, of Bedford, 3 months old, having an erectile tumor upon the nose, extending to a little above the superciliary ridge, below to within four lines of the end of the nose, and laterally quite to the inner angle of either eye. Highly vascular, bleeds freely upon the slightest touch, and is growing rapidly. The case gave some alarm on account of its involving the lids of the eyes, and threatening to injure their im-

portant functions; and also led to some doubts as to the best mode of operating.

After mature deliberation, I resolved upon the use of the hot needles, which were passed rapidly and freely through every portion of the tumor. A considerable number of the needles was used, on account of the unevenness of the surface, and the proximity of the tumor to the eyes, requiring the nicest manipulation. A total disorganization immediately ensued, leaving a black crust, which sloughed off in about a week. The whole suppurating surface was now touched freely with the nitrate of silver, to remove some slight inequalities, as well as to destroy a small red point upon one side. The sore was dressed with simple ointment, and healed slowly, promising to do well.

At the end of three months it showed a disposition to reproduction, when the needles were again introduced with the happiest effect, producing a speedy cure, and leaving but a small cicatrix, considering the size of the tumor.

REVIEWS AND BIBLIOGRAPHY.

Ventilation in American Dwellings, with a Series of Diagrams presenting Examples in Different Classes of Habitations. By DAVID BOSWELL REID, M.D., F.R.S.E., &c. *To which is added an Introductory Outline of the Progress of Improvement in Ventilation.* By ELISHA HARRIS, M.D., &c. New York: Wiley & Halsted. 1858. 8vo, pp. 124.

Physicians, architects, builders, and people generally, will find this volume a most important guide in the hygienic treatment of disease, in the planning of public buildings and private residences, and in the employment of those ordinary measures which insure a pure atmosphere in our dwellings. Being a domestic people, and passing much of our lives within our habitations, there can be no subject connected with sanitary reform which should interest us more than ventilation; yet there is scarcely a subject upon which we are more ignorant than this, as can be demonstrated by a visit to any building within our midst. We love comfort, and surround ourselves with all the luxuries which money can obtain and art devise; we rig our houses with costly heating apparatus, to bring to our very side the warm current of steam, of hot air or water; we have streams of pure water coursing through our houses and pouring at our will into every corner; we rob

night of its darkness through the aid of the chemist's skill, but neglect to supply ourselves with the greatest of all luxuries—the most easily to be obtained—a pure atmosphere.

“Air,” some one has said, “is the hidden food of life.” It is the aliment of respiration, and all the functions of the body depend upon it. No other food is so essentially necessary to existence, and yet no other food has so little attention to its preparation before it enters the body as the air we breathe. Upon the mountain side we puff the pure breezes and feel invigorated; in the crowded room we snuff the vile odors and feel depressed; but we little think what hidden changes are wrought in the constitution of the blood by the purity of the air, or the deleterious principles for which it serves as a vehicle. “As the air is, so is the blood,” has said one of the early writers in medicine; and as the blood is the body, so does the air bear to us the elements of health, or become a source of disease and cause of death.

Dr. Reid has done a great service in applying in this work the results of his great experience to the subject of “ventilation in American dwellings,” which are proverbially most ill-ventilated.

It is impossible for us to analyze this work, the treatment of the subject depending for its illustration upon the diagrams, which are profuse; but we would direct the attention of the physician to it as the best work on practical ventilation with which we are acquainted. The subject is generally and ably treated by Dr. Elisha Harris, in an introductory essay, including the progress in ventilation, and in this portion of the work we find that no author has done more to advance this part of hygiene than Dr. Reid. His writings have been numerous, and the application of his system has been successfully tried in the Houses of Parliament, in London, as well as many other public buildings in Great Britain.

As an instance of defective ventilation in hotels, Dr. Reid cites the case of the National Hotel, at Washington. This disease which affected the inmates of this hotel is so well known, and the views upon the subject are so conflicting, that we are glad to have the opinion, though cautiously expressed, of one so capable of grasping the subject as Dr. Reid. The recent death of one of our distinguished men, from the effects of the disease contracted at this hotel, has elicited the fact, that more than thirty have succumbed to its effects, while scores are still suffering.

The minds of all men in the profession have not been satisfied to receive the report of the Board of Health at Washington, or that of the committee of the Academy of Medicine in New York, as the ultima-

tum, and have waited patiently for the full published report of the facts to form their judgment; but in this work we find a suggestion thrown out which may go far to reconcile all conflicting views, and explain the occurrence of some phenomena which were not satisfactorily explained by the theory of miasmatic emanations.

Although Dr. Reid believes that this disease was not unconnected with the condition of the ventilation, he yet does not express himself as utterly opposed to the view that other causes may have contributed to increase the effect, for we find a doubt expressed in a foot note to page 7, in the following words: "Whether its effects may or may not have been increased by other causes and their proportionate influence, is another question;" and again, on page 94, "Whether other causes contributed or not, is a question that is not entered on here; recent facts and statements that have been made on this point may leave this an open question till the whole of the evidence on this subject shall be published and compared."

As other causes may have been present, he adds, "Let it be recollected that there are no deleterious gases that can arise from the admixture of chemicals that may meet in obstructed drains and sewers, that may not find their way into hotels, houses, and other buildings, as well as the products of putrefaction from animal and vegetable matters. Sewers may discharge there the products found at the distance of miles, particularly if they be trapped so as to exclude the access of air in the streets. And who can estimate the emanations that may not proceed from such sources, when they arise from chemicals discharged from a manufactory, an apothecary's shop, a paint shop, a telegraph office, or the poisoned remains of animals that may have accumulated in the sewers? Further, the very cement or mortar may imbibe materials that discharge sulphureted or arseniureted hydrogen from compound mixtures or fermentation, or from the action of an acid; and these find their way, by a retrograde current in the drains and sewers, to any building connected with them, when the drains have been injured and the traps rendered ineffective."

This is a point of view which few have taken of this disease, and thorough investigation made from it may terminate in solving a problem which is now enveloped in some mystery.

Ventilation as applied to the sick chamber constitutes one chapter in this work; and in others we are shown by diagrams how to medicate the air of rooms, or carry off any unpleasant emanations from the bodies of the sick, so as to prevent the propagation of contagious or infectious diseases.

Physicians are now attending more to the hygienic treatment of disease than heretofore, and this work will aid them greatly in studying the employment of one of the principal agents enumerated by Hallé among the circumfusa, and which received the first attention from the Father of Medicine.

D.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

Regular Meeting, Feb. 10, 1858. Dr. E. R. PEASLEE, *President*.

[Reported for the MONTHLY, by E. LEE JONES, M. D.]

A report of a case of fracture of the skull, with removal of portions of the fractured bones, was read by *Dr. Isaacs* for *Dr. Cochran*, of Brooklyn.

On the 7th of September, at 4 P.M., D. W——, a boy 14 years of age, fell about fifteen feet, into the hold of a ship lying at the foot of Eighth Street, New York. He was taken up in a state of perfect insensibility. Blood issued copiously from the nostrils. He was conveyed to his home in Brooklyn, by Dr. J. Asherly, who afterwards assisted at the operation, and while on the way he vomited small quantities of blood several times, and continued so to do until after the operation. I saw him about two hours after the accident. He was then, and had been, entirely unconscious since the fall.

Pulse small and irregular, insensible. *Pupils*, one contracted, the other dilated. *Skin* cold. There was considerable swelling from extravasated blood over the left temporal region; a wound about $\frac{3}{4}$ of an inch in length in the integuments, through which it could be discovered by the finger that the corresponding portion of the cranium was extensively fractured. A large quantity of blood was also extravasated over the central and lateral portions of the parietal and upper surface of the occipital bones, which were also ascertained to be fractured.

Dr. Isaacs, being called in consultation with Dr. Mitchell and myself, the wound in the integuments over the temple was enlarged by a conical incision, discovering a large quantity of extravasated blood which was turned out. Then the larger part of the squamous portion

of the temporal bone was found to be fractured, and driven in on the brain. A piece two inches long and one inch broad was raised up and extracted; some small fragments were also removed. An incision about four inches long was now made over the lateral portion of the parietal bone, a large coagulum was turned out, and a piece of bone two and a half by one and a half inches was found to be depressed to the extent of about half an inch. This was removed, with many small fragments.

It was now ascertained that the dura mater had been lacerated to the extent of more than two inches. On raising the bone, portions of the brain escaped. A fracture could be seen and felt to extend underneath the integuments, backwards and downwards towards the base of the skull, for at least two inches from the large opening caused by the removal of the bone, and was about quarter of an inch in width. How much farther this extended towards the base of the skull could not be ascertained. The edges of the bones at the large opening, and that of the narrow posterior fracture, were found to be denuded of their periosteum to the extent of nearly half an inch. The wound was dressed with soft pledgets of lint, covered with adhesive straps; warm applications were made to the feet, and a large enema was administered. The bowels fully opened. He remained entirely unconscious from the time of the accident until the ninth day. During the time his only nourishment was ice water and chicken tea. Spasms in all his extremities commenced on the fourth day, occurring every hour until the ninth day, and lasting from ten to thirty-five minutes each time.

On the ninth day there was some consciousness. This gradually increased, and from this time he might be said to be in partial possession of his mental faculties for five weeks. Of this period he now retains no recollection. About this time his mind suddenly seemed to become much clearer, and duly improved until at present he seems to be perfectly in possession of his intellect.

At the time of the accident it was noticed that there was a black circle around the eyes, from extravasated blood in the cellular tissue of the eyelids, and of the parts around and within the cavity of the orbits. This, after some nine or ten days, gradually passed away, after undergoing the various changes of color usually remarked under similar circumstances. It was accordingly believed that the fracture had extended into the orbital cavity, and blood had thus been extravasated into the eyelids and surrounding parts.

About the fourth day the wound presented a very unfavorable ap-

pearance. The granulations had a dark, unhealthy aspect. The discharge was thin, serous, and otherwise ill conditioned.

On the seventh day it was noticed there was a total absence of all granulations. The fractured bones were entirely naked to the distance of half an inch from their edges, and of a grayish yellow color. The discharge was black and exceedingly offensive. A fungus cerebri had appeared, about the size of a small hickory nut. Commenced the use of a diluted solution of chloride of soda to the wound. The strength of this was daily increased, the wound was dressed twice a day, and moderate pressure applied to keep down the fungus. Under this application the wound gradually improved in condition, granulations began to spring up, and on the thirteenth it was found to be impossible to keep down the fungus, which had increased to the size of a large pigeon's egg. It was excised on a level with the cranial bones.

The hæmorrhage from the vessels of the brain amounted to two or three ounces. As it was found impossible to ligature two or three of the arteries which had retracted underneath the edges of the bone, the bleeding was arrested by passing small pieces of lint under the bone with a probe, so as to press upon the vessels.

The fungus when removed, and examined, not only by the naked eye, but also by the microscope, was found to consist almost entirely of cerebral matter.

After excision, pressure was constantly and carefully applied to prevent any return of the protrusion. The use of the chloride of soda was continued for three weeks longer. From the ninth day for three weeks he refused to take any other nourishment than sugar candy, and occasionally calve's foot jelly, and ice water of which he drank enormous quantities. The above were the only articles he desired or could be induced to take. After this time his appetite became ravenous, and he was allowed the ordinary diet.

The bowels were opened thoroughly by enemas during the first twenty-four hours after the accident.

It is a remarkable fact, that after this time they were not moved for twenty-two days, inasmuch as every effort to administer enemas brought on severe spasms.

He also most obstinately resisted the taking of medicine of any kind, or in any shape, except syrup of rhubarb, of which he was very fond; it was given to him in increasing doses daily, until he had consumed ten ounces, when an operation was obtained.

As repeated attempts to open the bowels, either by purgatives or

enemas, were found to produce excessive agitation and spasms, it was deemed most judicious not to insist any more on this point.

From this period the boy has gone on in a steady course of improvement, and you have the patient now before you, completely restored to health.

Dr. Gardiner then made a verbal report of a case. He was called last Monday to see a young woman, who was very near her time of confinement, but who had ceased to feel life since the Tuesday preceding; previous to that time she had abundance of signs; this was her first labor. On the Tuesday referred to, while passing up and down her room, she felt three or four very severe movements in her side; from that period no motion was perceptible. On Tuesday morning, at about four o'clock, the membranes ruptured high up; about five o'clock the same morning, when he made a very careful vaginal examination, there were no signs whatever of an os tinæ. After careful manipulating he discovered an opening about the size of a pin's head; it seemed hardly possible that this should have given vent to the amniotic fluid. He made a careful stethoscopic examination, and found no signs of the foetal heart; the placental bruit was perfectly distinct. After a little while this small orifice dilated, a pouch protruded, which was evidently not the amniotic membranes, but a portion of the scalp of the child. The os dilated very slowly; about two o'clock P.M. there was a large protuberance from the vagina, as big as the fist, under the pubis; along with it the eyes and nose of the child were plainly perceptible; it remained there for a considerable time; severe pains seeming to make no impression upon it, he made traction by means of the mouth; the operation took about half an hour. The os was dilated, but not sufficiently to allow the delivery of the child without some force. Here is the foetus; the portion which presented was the frontal portion, where there seemed to be some deficiency in bony structure, apparently an arrest of development; this was the portion which presented, the bones of the head being pressed down into the sac until it was delivered; in other respects the child was perfectly well formed. On noticing this deficiency, he asked if she had any frights during her term of pregnancy by which she could account for this. He could not discover that any mental impression had anything to do with this arrest of development. A similar case of a child had come under his observation, which had a similar deficiency in the back part of the head, which seemed to have been occasioned by the mother being frightened by a monkey. The head of the child somewhat resembled in shape that of a monkey.

Dr. Finnell presented a specimen of a *malformed fetus*, with the following history. Mrs. G——, aged 28 years, mother of two children: she has had three miscarriages, all produced by the introduction of a common reed, taken from a hoop skirt. In the middle of last September, she supposing herself to be six weeks pregnant, introduced the reed for the purpose of inducing abortion. This she did at three different periods, twice during the sixth and once during the seventh week of her pregnancy. The last introduction was followed by a sanguineous discharge from the vagina, and continued at intervals, until January 30th, 1858, when she was delivered of a malformed foetus, which is presented to the Society for inspection. It should be mentioned, that at the time of her delivery the presenting part was the placenta; this could be distinctly felt on a vaginal examination, and part of it was delivered before the body of the foetus. There was no umbilical cord, the placenta being attached to a protruding mass occupying the position of the abdomen. The foetus was deficient of the lower extremity, the right foot being turned inward. The sex of the foetus could not be determined. The mother died four days after delivery, of metro-peritonitis.

Dr. Dalton regarded it as an interesting specimen in relation to the influence direct violence may have in producing deformities. Certain deformities and deficiencies of the cranium have very much the appearance of being the result of mechanical shocks or pressure from the exterior.

Dr. Peaslee remarked that it was very interesting in relation to the position of the foetus in utero, and would perhaps throw some light upon the question, in relation to the fact; up to six months it is said to have no determined position in the uterus.

Dr. Dalton asked if he regarded it as an established fact in relation to position of foetus?

Dr. Peaslee would simply refer to Prof. Simpson for his authority, who has written some very elaborate papers upon this subject, which to his mind were perfectly satisfactory.

Dr. J. C. Dalton presented a parasitic worm, taken from the vena cava of a dog. About a year ago he showed another specimen of the same kind as he had here. That was taken from a dog brought to him by Dr. Livingston; he was apparently in a very healthy state until within a couple of days of his death, on a Saturday, when he was shut in an upper room; and coming to look after him the next Monday morning, he was found dead upon the pavement, having jumped from the window. It was not known whether his death was caused

by the worms or the fall. He described the character of the worms at that time. Here was exhibited another specimen of the same kind, taken from the College of Physicians and Surgeons' Museum, labelled "the heart of a dog filled with worms," sent from China. Inasmuch as there was very little account connected with it, there were doubts entertained as to its authenticity. He compared these with those that he examined from the vena cava, and found them to be the same. The worms were situated in the cava in the immediate neighborhood of the right auricle; they are a species of spiroptera, and belong to the same family as the ascarides. In this case, a single specimen is between 7 and 8 inches long. The anatomy of these worms is quite complete; they are cylindrical and thread-like, tapering at two extremities; mouth is simple and unarmed; the intestines are simple and straight, passing directly through the body, terminating in the anus, at or very near the tail. The sexes are very distinct. In both, the genital organs consist of a tube which is wrapt around the intestine spirally, terminating in a penis in the male and a vulva in the female. They are called spiroptera, because in the male the tail is twisted spirally. The single specimen which he shows to-night is a female; the ovaries are perfectly filled with eggs, and might be counted by thousands. There were several points of interest, one of which was, that these worms so large in size could occupy the position indicated and still do no harm. In the first two cases referred to, one has no definite history, and in the other it was rather supposed that the worms had more to do with the death than the fall; but with regard to this specimen, something definite is known. It was taken from a perfectly healthy bitch, which he had in his possession a week or ten days, and her death was not connected in any way with the presence of the parasite.

Dr. Clark observed that he would remind the Society that a good many years ago he presented a drawing of some rather extraordinary productions in the veins of a frog—a philarious worm, without any internal organization that could be seen through the thin web of the foot. They existed in great numbers through a very large field of the microscope, with a magnifying power of 400 diameters, covering over an apparent space of more than 7 inches; their disproportion to the capillaries was enormous; they were wiggling along, nobody knew where. The frog was kept the whole of the winter, a period of four months, for the purpose of marking the progress of things, when, going to look for it one morning, he found that it had been swallowed all but its legs by another frog.

Dr. Dalton remarked that there had been several species of parasites discovered in the blood-vessels from time to time, some seven or eight different species, the most common of which are those seen in the capillaries of a frog. They are sometimes found in the blood-vessels of the human subject, dog, and various other animals. In all the instances the worms are microscopical. This worm, which was found in the vena cava, is one of the spiroptera, and has never been described. We can understand how microscopic animals can reside in the blood-vessels and cause no trouble, except only as they accumulate to stop up the vessels. The habitation of the spiroptera in the dog is in the mucous membrane of the stomach, or underneath it.

Dr. A. Clark showed a specimen of *Chronic Pneumonia*. It is not very usual that we have an opportunity of seeing a tolerably well-marked specimen of chronic pneumonia. He has one here that is sufficiently striking. These are the fragments of a lung removed the other day. It will be observed that they sink in water; it is the same with the whole of the upper portion of this, the left lung. In examining the fragments, they will be found to be very hard, yielding almost not at all to the pressure of the finger, giving not the slightest crepitus, as if air was discharged from them, having a gray look, not altogether unlike that which is observed in the gray stage of acute pneumonia. The reason why this is so fragmentary, is that the lung was so firmly adherent to the walls of the chest that the young gentleman could not remove it except by dissecting it piecemeal. The upper and lower lobes were very firmly bound together by very abundant adventitious areolar tissue. As a whole, he thinks it presents the appearance, both to the naked eye and under the microscope, of chronic pneumonia in a very striking manner.

His history is simply this: He had him under observation during his last term of service at the hospital, at the expiration of which he left him, and for the recorded history of his case he is indebted to the kindness of *Dr. J. R. Buist*, of Bellevue Hospital.

A man *æt.* 55, being healthy looking, came into the hospital on one of the last days of September, with acute pneumonia; he went through the disease, running some risk, as was thought, of his life; but the symptoms began to subside in the usual way. The inferior portion of the left lung was the seat of attack. After the symptoms of the pneumonia ceased, he did not recover as rapidly as we hoped he would. On physical examination, it was ascertained that the whole upper portion of the left lung was becoming dull to percussion, and the respiratory murmur becoming indistinct. These physical signs increased with

such rapidity that this portion of the lung was almost solid at the end of two weeks. It was his (Dr. C.'s) conviction, that this was a case of tuberculous infiltration following acute pneumonia. There was present bronchial respiration, bronchophony, copious expectoration, dullness on percussion, rales in the bronchial tubes, and for a little time night sweats. No hæmorrhage occurred that he is aware of with these symptoms. He remained in the hospital, being regarded as a case of tuberculosis; he was not frequently examined. When he was examined by the House Physician at the end of December or along first of January, the same signs were noticed as before, without any evidences of softening, which excited some interest, but still did not cause the diagnosis to be altered. He supposed it to be a case of tuberculous infiltration. He did not compare the two sides of the chest, else he would have found sinking instead of fullness upon the diseased side. His symptoms from that time began to improve up to a few days ago, when he was seized with acute pneumonia of the opposite side, and, as may readily be supposed, with the diseased side so much disabled, he did not live long. On post-mortem examination, the condition above described of things was found in the left lung, while the right was affected with acute pneumonia. There were no tubercles in the right lung.

Microscopical Examination.—Under the microscope, it was found that the change in the lung tissue was occasioned by the deposit of fibres of a new production in very great quantity all through the lung tissue; only here and there the position of a single air vessel can be seen; they seem all to have been compressed and obliterated by this great abundance of fibres in the tissue. It is to this circumstance that it owes its firmness to the feel and resistance of the knife. There is a great deal of fatty material present, as is common in cases of this sort, in long-continued low grades of inflammation. There are groups of perfectly well-formed cells, with a nucleus quite distinct, most disposed to be of an oval shape, evidently a new production, situated outside the air cells; a few are among the fibres. He supposes these to be tuberculous cells. He is aware that Bennet says that tubercles have no cells. This is the case only when they have advanced; but recent tubercles are cellular; the cells break down after a while and become granular. He supposes, then, that probably here are tubercles. He is not prepared to say that they caused the pneumonia, but that they occurred together is of interest, in connection with the fact that he had been deceived by the occurrence of a rare disease in place of one that

was not very uncommon—tuberculous disease—most likely to occur under these circumstances.

Regular Meeting, February 24th, 1858.

Dr. J. C. Finnell exhibited an instance of *hypertrophy of labia minora* from a dissecting-room subject. The masses extended three inches below the vulva, and apparently consist mainly of integuments and fibrous tissue in the interior.

Dr. Finnell's second specimen consisted of portions of two stomachs, taken from two persons *poisoned by arsenic*—a lover and his mistress, male æt. 24 and female 22. As near as could be ascertained, the arsenic was mixed in the morning, about twelve o'clock, by the female, she drinking a large quantity for herself, and an hour or two afterwards she administered some to her friend; both remained in the room till evening, when going to bed the female fell out upon the floor; he hearing the noise, called for assistance, and found that she was dead. The female lived six hours, and the male eight. The stomach shows the ordinary appearance produced by the irritant effects of that poison.

Dr. Markoe asked in connection with the first specimen, (*labia minora*,) if any portion was submitted to microscopic examination.

Dr. Finnell. None. At first sight it looked very much like syphilitic vegetations, but they were of too firm a character to be mistaken.

Dr. Peaslee observed that the specimen of hypertrophy of the *labia minora* reminded him of one which he saw two years since, upon a living subject. A lady about 39 or 40 years of age, married at that time for the first time, called on him presenting a case of hypertrophy of the left labium; it formed a mass about half as large as this one. The right was not enlarged at all, while the left was very much elongated and thickened, and was found to give so much inconvenience to her husband, and interfered with sexual intercourse when that was indulged in, that she wished it to be removed. She stated that it had been enlarged as far back as she could remember, but had increased very much during the year she was married.

Dr. G. Buck presented a case of *concealed inguinal hernia*. The patient was a young man of good constitution, 28 years of age, and had ordinarily enjoyed good health, with the exception of occasional attacks of colic, to which he had been subject for a number of years. These attacks were attended with quite severe pain, from which he obtained relief by taking, according to his account, "schnaps" and mild cathartic medicine. By these means he was uniformly relieved. These attacks were never attended with vomiting. In this case he was attacked on Wednesday afternoon, about four o'clock, without any

obvious cause; he had not been subjected to any strain or violence of any kind, although he had a good deal to worry his mind, for the Sunday previous his mother died; his store was robbed. About an hour or so after the attack vomiting came on. The attack commenced with a severe pain in the neighborhood of the left inguinal region; vomiting continued and kept increasing up to the time he first saw him, on Saturday evening. The physician who requested his attendance had only seen the case twice, it having been transferred to his hands from an homœopathic physician, and it was only at the second visit of my colleague that his attention was directed to his groin.

Examining the left groin, the testicle was found still to be located over the external ring; it had never descended into the scrotum. He complained of but little pain on handling the part; could tolerate pressure without pain. He suffered severe pain in the abdomen, which was moderately distended, and obliged him to lay with his shoulders resting against the head-board, and limbs drawn up. In the left groin the tumor formed by the testis was about the size of the butt end of an egg. It was movable and elastic to the feel, without any adhesions to the surrounding parts. The finger could be insinuated under the tumor so as to enter the ring three-fourths of an inch, but encountered nothing in the canal. On making very deep and firm pressure in the region of the internal ring, he could feel a distinct lump about the bulk of the last joint of his finger. When this was rubbed he admitted that it was tender. There was no external swelling or induration over this point. Inasmuch as he had been relieved by cathartics in previous attacks, and considering that a fair trial had not yet been made, we judged proper for him to take ℞j. of calomel, to be followed by injections, and hot fomentations to be kept over the abdomen. He had doses of oil, which, after remaining several hours, were vomited. The next morning he obtained no relief; the vomiting was attended with more pain. Hiccuping was a very annoying symptom. The pulse was 82; skin perfectly natural; no undue excitement. It was now decided to perform an operation, and making the incision through the integument, this tumor, from its resemblance to a hernial sac, at first perplexed us, but pressure with the finger discovered the testis in the interior. This sac, which proved to be the tunica vaginalis, was laid open and found filled with bloody fluid, and the atrophied testis and cord were brought into view, stretching the opening; the finger could be passed along into the canal. As high as the finger could reach we encountered a portion of gut protruding into the canal; and besides this, could be felt a distinct, firm body, the size of a cherry. Insinu-

ating the finger along the outside of this solid body, the internal ring was encountered, firmly embracing the incarcerated parts. This was divided according to the rules in such cases, and everything was at once restored. It was ascertained that everything was reduced into the cavity of the abdomen by introducing the finger within the internal ring and sweeping it around. The wound was dressed with adhesive straps, compress, and bandage. The whole operation from the commencement of the administration of ether, did not last over an hour. He came out from under its influence gradually, there being no other marked influence than moderate increased frequency of the pulse, as is ordinarily the case; but before he left he observed the pulse becoming weaker; the hands were moist, but not more so than usual after operations of this kind. He ordered brandy and water to be given the coming two hours, at the end of which time he called again, when he was found in a state of collapse; the pulse was very feeble and rather reduced in frequency to 76; with a clammy and cold skin, and exceedingly restless, suffering severe pain in the lumbar region. He ascertained that the bowels had been freely moved; the vomiting and hiccup had not recurred. This sudden and rapid collapse was a most alarming feature in his case, and suggested the idea that probably internal hæmorrhage might have taken place from a wound of the epigastric artery, but no corroborative sign could be detected; the abdomen had rather subsided than otherwise; percussion in the left iliac region, as well as in every part of the abdomen, showed resonance. Stimulants were administered as long as he could swallow, and he survived until 9 o'clock in the evening, when he sank.

Autopsy.—To his great relief, no blood was found in the abdomen. The small intestines were moderately distended, and everywhere much injected; all the minute vessels were very distinctly traced out. In the cavity of the pelvis there were three or four ounces of fluid, with a few flakes of lymph. No lymph coating the intestines. That portion of the intestine that was strangulated was readily recognized, and consisted of a single noose of small intestine, embracing its entire circumference and portion, being about five inches in length; it had a grayish color distinctly defined from the surface on either side. At no point had it given way or the texture been weakened. About two inches from that was found a pedunculated appendage hanging from the intestine by a stalk of the thickness of a blunt end of a probe, $\frac{3}{4}$ of an inch in length. The appendage was of the size of a cherry, of a slate color, its surface being smooth and shining like peritoneal surface. Viewed from the inner surface of the intestine, a funnel-shaped

depression marked the point at which the stalk joined the gut, but a fine needle could not be made to pass into it.

The sac is seen with the atrophied testicle occupying it, and can be traced distinctly up to its termination at the inner ring, where the orifice forms a funnel-shaped entrance, and on the anterior edge is recognized the incision made in liberating the constricting part.

This case is remarkable and interesting in view of the concealed character of the hernia, the readiness with which it might have escaped attention, even in the examination of the parts themselves. The symptoms were those of obstruction, and the existence of the hernia was only determined by very careful examination of the deep parts; also of the rapid collapse that succeeded, and in this instance it was more rapid than any that have come under his notice.

Dr. W. H. Draper exhibited a specimen of *medullary cancer of the breast* removed to-day by *Dr. Parker*. It presents nothing very rare in its history, but only as regards its comparative frequency in this situation.

It was taken from a lady 47 years old, and mother of several children; there is no trace of hereditary predisposition in the family. Last June she received a severe blow in the right breast, and shortly afterwards a small lump presented itself; she applied to a physician, who ordered a stimulating poultice to be applied, which she did for two months; she also applied several stimulating plasters, and, as the tumor increased in size and gave her pain and uneasiness, she applied to the surgeons, who pronounced it scirrhus. It went on increasing, and she came to the city for the purpose of having it removed. The tumor as it now appears is nearly the size of a foetal head. It did not present the ordinary character of scirrhus of the breast; the skin was involved, there were no morbid adhesions, the nipple was not retracted. No adhesions to pectoral muscle. The larger part of the swelling was to the left of the nipple, while to the right it had the natural consistence. To the left of the nipple there was an erythymatous blush about the size of a dollar, where the skin seemed thin and gave rise to a sense of fluctuation. The tumor was removed, and presents the aspect which you see. It has the ordinary characteristics of medullary cancer. It has a thin investing membrane, which seems to be in some degree independent of the breast; the line of demarkation is pretty distinct. On opening the tumor, a considerable quantity of serous fluid flowed out; the remainder was filled with this pulpy brain-like matter.

He presents this specimen in order to inquire from the members as to the comparative frequency of medullary cancer in this region. Ac-

according to Paget, it is more rare in the breast than in any region of the body; he gives the experience of Mr. Lawrence, (which is very extensive,) who only saw two cases. Mr. Paget only saw four cases. The experience of writers on the Continent varies; according to Lebert, one-fifth of all the cancerous tumors of the breast are medullary. Mr. Paget states the same with regard to tumors in this country and Germany. The microscopic characters are those of medullary cancer, pellucid nuclei with bright nucleoli, and granular nuclei in great numbers imbedded in a soft nebulous blastema.

SELECTIONS.

The Medical Uses of Wines.

This is a subject thickly clouded with all sorts of prejudices and prepossessions, as is the discussion of most substances used equally by the sick and the healthy. Persons argue that what is good for themselves must be good for their patients. We have known a plethoric dietician, who himself loved lobster-salad and champagne in the small hours, advise a starveling dyspeptic to follow his custom of taking no breakfast till noon. So a hearty rough-stomached doctor will declare one diluted alcohol just as good as another; the ascetic, or the reformed rake, will pronounce all equally bad; the gouty will dread all that is thin and acid; the aguish will have a predilection for Port.

It is very possible that prime wines may be made of all kinds, which may be equally and perfectly wholesome; but their rarity will always put them out of the reach of our patients, and what we have practically to think of in naming a wine for use, is at best a second or third-rate article. We must also choose those which are capable of being grown in quantity proportioned to their popularity, or the chances of adulteration are exaggerated. When Madeira was on everybody's table, it could not be recommended to patients, for in nine cases out of ten it was either an inferior sort or a sour imitation. But now that it has gone out of fashion, a wholesome and often a very perfect wine is to be bought of that kind, and the adulterators expend their ingenuity upon Sherry. What we want is a liquor which is either produced in very large quantities, or is not sufficiently known to the million for it to be worth imitating.

The medical questions concerning the employment of wine will be put in the clearest light for exhibiting our real knowledge and ignorance, by considering separately the physiological effects on the human frame.

The effects may be practically included under the following heads:

Exhilaration, Nutrition, Arrest of Destructive Metamorphosis, Inebriation, Degeneration of Tissue, Derangement of Digestion. The three first are good—the three last bad; and the object is to secure the former, while avoiding the latter.

Exhilaration is not merely a minor degree of drunkenness. It may be produced by many things besides alcohol, and which do not inebriate—such as, for example, the essential oils, peppermint, onions, valerian, assafoetida, tea, coffee. Even eating, and the increased circulation of blood, produce the effect to some extent. Alcoholic fluids truly do exhilarate with the greatest certainty and rapidity, but not in direct proportion to the alcohol they contain. A glass of wine will raise the spirits of a healthy person as much as a glass of gin; a glass of fine claret as much as one of strong tavern port; and this is not merely from the pleasure of taste or association, for the same may be observed in fever patients, whose gustatory nerves are blunted by a thick coating of sordes.

The distinction is not only a subjective one, evident to the mind of the recipient, while it is incapable of demonstration to others. There is a real physiological difference in the effects which follow exhilarating and intoxicating doses—a difference which, in its ultimate results, amounts to a complete contrast. The former *increase* the amount of vital powers rendered available in a given period, and the latter *decrease* them. Can there be a more perfect antithesis?

This is too important a matter to rest solely on the unassisted senses of patient or observer, and it does not do so, for the admirable experiments of Dr. Böcker have submitted it to the proof of chemical analysis. Though the whole series of his investigations into the action of alcoholic stimulants bear directly on the present subject, they are too mutually dependent on one another, and too lengthy for quotation. The general results, however, may be stated as follows:

1. The special action of alcoholic drinks is to arrest destructive assimilation—to stop the over-active processes of life in their effects upon the organism; so that, for a certain period during the stay of the alcohol in the system, less urea, less phosphates, less water are excreted by the kidneys, less carbonic acid by the lungs, and less digestion goes on in the alimentary canal, showing that the muscles, bones, nerves, &c., are not getting rid of their effete tissue, but retaining it, and making use of it as far as possible.

2. But at the same time they give rise in the body to a defensive *reaction*, which is prominent, first, immediately after taking the dose, then gives place to the special action, and on this ceasing is again manifested to a greater extent.

3. So that if a suitable quantity be taken, and if both action and reaction are allowed to exhaust themselves before the dose be repeated, more manifestation of life, represented by more excretion and more consequent renewal of the body, takes place in a given time with the alcoholic drink than without. There has been a positive gain in vitality.

4. But if such a large quantity is taken at once that the reaction

is overpowered, or if it is arrested by a continuous repetition of the dose, the manifestation of life is kept down; the body is not renewed, because its effete particles are not removed, and the amount of vitality must certainly be reckoned at a loss.*

The first-named state is Exhilaration, in which the alcohol may be fairly called a food or medicine, a medicinal food or dietetic medicine, for body and mind. The second state is Intoxication, when it is a poison to both.

Now, the exhilarating effects of diluted alcohol are very much increased by its admixture with sugar, extractive, vegetable essential oils, ethers, and the allied substances which have been described as producing the aroma and bouquet of wines. With a quantity of alcohol which taken alone would be inefficient, a delicate wine is able to produce a decided impression upon the nervous system. When, then, this is mainly sought, as in cases of mental depression, hypochondriasis without bodily ailment, nervous exhaustion, over-anxiety, hysterical fainting, vomiting, and the like, or when wine is wanted merely to smoothe down the roughnesses of daily toil, we must remember that the good result may be obtained without the evil; and we can obtain it with least chance of the evil by selecting liquors richest in their peculiar scented constituents. Bordeaux, Champagne, Rhine, and Moselle wines offer a variety of choice, the first being the most perfect and suitable to the greatest number of these cases; whilst the others have certain inconveniences, hereafter to be mentioned, which often forbid their use in the special case to be prescribed for.

The beneficial effects on the nervous system are increased by effervescence; thus, sparkling Champagne will sometimes have a most magical effect in stopping vomiting in cases accompanied with much nervous depression. And even in health, the greater exhilaration caused by genuine effervescing wines is notorious. The physiological explanation of this result is not very clear. It cannot be due to the carbonic acid alone, for the inhalation of this gas tends to completely opposite consequences. Perhaps the sudden physical change in the liquid during the extrication of the fixed air develops ethers which in a nascent state are more potent than at other times. Perhaps other gases are generated, whose properties are in themselves exhilarating. In the Champagne sent into Wurtemberg from Rheims, Baron Liebig found that for every volume of carbonic acid there were two volumes of protoxide of nitrogen† (laughing gas); and it was assumed, without absolute proof, to have been artificially introduced for the purpose of augmenting the joyous results of the bottle. The subject demands chemical investigation on purely scientific grounds; and it would, moreover, be useful to know if we could thus at will increase the required exhilaration, while decreasing the quantity of alcohol or carbonic acid.

* Beiträge zur Heilkunde, von F. W. Böcker, vol. i., sect. 6. Weingeist. We have introduced the name of this author again in our heading list, because he, and indeed all physiologists of the Schultz-Schultzenstein school, are much less known in England than they deserve. A collection of translations and abstracts would make an admirable volume for the new Sydenham Society.

† Medical Times, Nov. 1850.

The gladdening effects of alcohol are augmented by its mixture with other constituents of wine, but its intoxicating or poisoning effects are diminished, and thus more may be taken, with its advantages and without its evils. So that, for example, if a man drinks a pint of Mr. Brande's Marsala, he gets a somewhat larger dose of spirit than there is in half a pint of gin,* but, it is unnecessary to say, without the same bad consequences. This is partly to be attributed to the presence of the ethers† and sugar, but also in a great degree to the intimate combination of the alcohol with extractive and albuminous matter, so that it is not absorbed immediately by the membranes, but gradually and during a process of digestion. It is obvious that its local effect on the mucous surfaces and viscera must be thus much modified, and a powerful argument is afforded in favor of the use of wine instead of brandy for invalids.

Nutrition is an indirect effect of wine. There is shown by chemical investigation to be very little substance in it capable of building up the body. The phosphates and albumen are more readily found elsewhere, as Franklin has imprinted on our memories by his comparison of a penny roll and a gallon of beer. But alcohol seems to render the alimentary canal more ready to absorb nutriment. Farmers find this, and always try to put some waste beer or fermenting grains in their pig troughs. Physicians find it, too, and give their patients cod-liver oil in a glass of sherry when they would have it fatten quickly. The effect, however, is probably confined to oleaginous food and the adipose tissue, for the digestion of albuminous matter by the gastric juice is certainly impeded by alcohol.

Hence we gain the following rules concerning the administration of wine as an aid to nutrition:—1st. That the alcoholic contents are those of principal importance, and that the amount of solid or nutritive matter in the wine makes little difference. 2ndly. That we may hope help from it in increasing adipose tissue, but not muscle. 3rdly. That, as its agreement with fatty food is the prime object, we must avoid those wines which are likely to make such food unassimilable, as, for example, by making it rancid; and therefore, 4thly. That sound wines with a small proportion of acid to their alcohol, and but little body to cause re-fermentation, should be selected; the types of perfection may be considered the dry Spanish wines, Amontillado and Manzanilla. And, 5thly. They should be taken along with the fatty food itself, or immediately after it.

The *arrest of destructive metamorphosis*, or what has been picturesquely called "the moulting of the tissues," is unquestionably the most important of the medical uses of alcoholic liquids. By them we are

* Marsala contains 26.03 per cent. of absolute alcohol (Brande); Geneva, 49.4 per cent. (Jones).

† The disinebriating influence of ether is shown by its being actually a remedy for drunkenness. Twenty or thirty drops taken neat on a little oil will restore to temporary sobriety. The knowledge of this fact has been popularized in France, by its forming a point in a wicked railway novel (*Le Trou de l'Enfer*), the author of which perhaps owed it to M. Batilliat (*Traité sur les Vins de la France*, p. 190).

enabled to stay the progress of interstitial death in low fevers, till the period of the zymotic poison's virulence is passed, and it has either been evacuated or become inert. By them we can check the exhaustion of the body through excessive secretion, as in cases of chronic catarrh, ulcers, abscesses, amputations, &c. By them we can diminish, in ordinary dietetics, the wearing out of the body by the over-worked mind, which in this busy metropolis throws so many into the hands of the physician. But in the wielding of this two-edged sword the greatest judgment is requisite, lest we carry the effect too far. The destruction of effete tissues is part of life, and necessarily precedes constructive renewal; if, then, we check it too far, interstitial life is diminished, and the system is overloaded with matter incapable of vitality.

It is better, therefore, to give alcohol in a diluted form, even when we wish to produce its most decided action, as in typhus fever, for example. And it is better to give it combined, as it is in wine, with other substances of partially corresponding action, than to administer it merely diffused in water, as is sometimes done for economy's sake. Sugar, we know from Dr. Böcker's experiments, has a special effect in limiting the destruction of tissues containing phosphates, tissues of no less importance than the bones and nerves. And it is likely that similar investigations into the physiology of ethers may show some special effects belonging to them. The acids, too, and the extractive in wines, seem to prevent better than water those injurious effects upon the mucous membranes which spirituous liquors exhibit. There is, then, no extravagance in preferring wine to brandy and water in the management of low fevers in hospital and parish practice.

This is not the place to discuss details in the mode and period of administering wine in acute complaints. But one reminder may be deduced from the view taken of its physiological action—viz., to allow intervals to elapse, during which its effects may subside, and the system recover for a time its metamorphoses, so that the effete tissues may have a due exit. The night is a convenient time for this in general; but if, from any cause, that is considered inexpedient, some hours of corresponding duration should be selected, during which the administration of stimulants may be discontinued.

The wine chosen for fever cases is usually Port; but the rarity of really good Portugal wine, and the excessive badness of all low-priced imitations now in the market, render it daily more and more incumbent upon us to have substitutes at hand. The best in the London market seem to be the red Spanish wines, Beni Carlo, and Cadiz; especially the former, which, indeed, is often mixed with spoiled Portuguese wine, and sold as port. It may be had in the wood at a low price, considering its strength, and is highly to be commended for hospital use in a diluted state.

Poor people, however, are not the only patients supplied with Port wine unfitted for the sick room. The prepossession in favor of antiquity causes many cellars in wealthy houses to furnish nothing but a damaged article. To find fault with a bottle that cost a great sum a

great many years ago, is flat heresy; and the better way is to give it up at once, and order your patient a good full-bodied wine of a different nature, such as Madeira, Burgundy, or Hermitage.

Inebriation is a terrible word to meet with in periodical literature. It opens up a prospect of so many social and political questions, that the reader is apt to close the page in despair. He shall be let off here with a simple remark derived from wayside observation—viz, that in all countries where wine is plentiful and cheap, drunkenness is almost unknown; where it is most expensive, that vice is at its maximum.

Degeneration of tissue, as a consequence of drinking, appears to be a chronic state of that arrest of metamorphosis which has been already discussed as a remedy for disease. The effete tissue remains as a useless burden mixed up with the healthy, and is finally converted into the least vitalized of all the organic constituents of the body, oil or fat. Careful and valuable observations have been made by Dr. Böcker, on the abnormally retained blood-discs in the circulating fluids of habitual spirit-drinkers, and the appearance of the degenerated hearts, livers, and kidneys of these miserable suicides is familiar to us all.

Degeneration arises from the arrest of metamorphosis being too long and continuously kept up. Hence there is little danger of it in acute cases, where the large quantity of alcoholic remedies we find it expedient to administer is necessarily diminished as the disease recedes, and during convalescence is reduced to the ordinary allowance of health. But in chronic cases it is often a matter for serious consideration whether we shall employ an agent capable of doing along with the good we intend, an evil greater than that originally to be combated. If the dose of a stimulant be repeated before the arrest of metamorphosis has ceased and the reaction of the system has begun, a second arrest indeed takes place as before; but the postponed reaction is augmented in force each time it is delayed, and when it occurs at last, it is so painfully depressing that it becomes more and more difficult to resist the instinct to put it off, and in the end it is really dangerous to do so suddenly. This is the short history of confirmed tippling; and often we fear it may be traced in its origin to the carelessly worded advice of some medical man. Science or practice has taught him that alcoholic action will alleviate certain morbid phenomena, and he recommends it without due warning. The patient knows no harm in alcohol except drunkenness, and so long as he avoids that vice, thinks he cannot keep up too steadily the agreeable relief he experiences.

Alas! much safer for him would be the occasional debauch of a man he despises as a profligate, than his own continuous steady course towards death. A drunken bout brings its own cure, and is usually allowed to be followed by reaction afterwards; but the most alarming symptom in a tippler is that he *cannot* get drunk. Day by day there is a little less and a little less life in his system, till at last his degenerated body is fit for burial.

Now, the results above described are, practically speaking, unknown

as the consequence of wine; it is spirit drinking that leads to them. There are several reasons for this, independent of the chemical differences of the liquors. Wine is rarely used except at the principal meal, or as a sort of medicine in measured quantity at other hours, so that the effects have time to pass away before another dose becomes due, and no craving for increased quantity is experienced. In fact, men go on taking daily for quarters of their life the same identical number of glasses, feeling daily the same comfort, and never finding it necessary to increase the quantity. But the spirit bottle is opened when its owner "feels to want it,"—nay, it is very often carried about the person under the appropriate name, as regards its deadly results, of a "pocket pistol."

We have been in the habit, in insurance practice, of omitting the usual inquiries about "sobriety" and "temperance," &c., which give offence and elicit no information, and substituting for them the simple question—"Do you ever take spirits *between meals*?" This is something definite, not to be shirked, and if answered in the affirmative should lead to rejection.

The subject of spirit drinking takes up more space in this article than our promise of avoiding temperance common-places perhaps led the reader to expect. But we have two excuses: one is, that it occupies quite distinct ground from the question of drunkenness, has much more to do with the production of disease, and is therefore much more the province of a medical reviewer. The other excuse is (we blush to write it), that no class of persons who have received a liberal education are so often addicted to it as medical men. Londoners were shocked two or three years ago at the suicide of a highly moral and intellectual surgeon, who left a paper attributing his despair to the habit of secret tippling; but they would have been less astonished had they known how many practitioners all over the country suffer from the peculiar dyspepsia of alcoholism. The long robe and her Majesty's uniforms are occasionally disgraced by inebriation, clergymen may sit too long at the bottle, but spirit tippling seems left to medical men and the classes below them. They have many temptations: hard mental and corporeal toil, sudden calls for exertion when tired, broken rest, irregular exposure to cold and wet, weary waiting in lone farm-houses for lingering labors, the dull company of ill-educated persons, the wish to be sociable and not seem proud, are a few of them. Into these temptations they do fall, and that on a large scale, especially in rural districts.

To require of an unfortunate patient and brother practitioner that he should give up at a blow that alcohol which instinct and science agree in teaching him to be necessary, is too great a demand. If he became a teetotaller, he would probably die all the sooner. Hard common-places about the virtue of temperance and the evil of its opposite, produce no more effect than schoolboy's themes. What he wants is—first, kind sympathy with his *misfortune*, and second, a rational means of getting rid of it. Now, nothing contributes more towards the latter than a clear sketch of the chemistry and physiology

of the subject, and a belief that the advantages of alcohol may be had without its disadvantages. He should reflect how wine differs from the spirits which are in it; and again, how it is not so much the quantity, but the frequency of the dose, which is hurrying him to the grave and his children to poverty. The most complete relief is the substitution of wine for spirits. The very economy which was perhaps the first origin of the habit, will prevent excess in the dearer liquid. If that cannot be accomplished, let at all events drams between meals be avoided as poison; and let the addition of sugar, and flavors in the shape of lemon, fruit, or a few drops of nitric ether, make the drink approach a step nearer to the juice of the grape, and be daily more and more diluted.

Among the *Derangements of Digestion* arising from wine, it will not be necessary to dwell long upon the immediate consequences of a debauch. It is usual, in army medical returns, to report it as "febris," as indeed there is, truly enough, an ephemeral fever, but, like other fevers, it works its own cure, and civilians are not in the habit of applying to it the same euphemistic nomenclature. But, without being taken in such quantity as to be considered an excess as regards alcohol, wines will sometimes cause a disturbance of digestion, which prevents our sanctioning their use in cases where otherwise we might be willing or anxious to do so. This is always accompanied by the presence of a large quantity of acid in the alimentary canal.

In some instances this excessive production of acid follows equally all sorts of wines, and even spirits. Then it is due to the mucous membrane of the stomach being so morbidly sensitive that it becomes irritable and temporarily inflamed, so that it refuses to secrete its solvent juice, and to perform with sufficient activity the peristaltic movements. Hence the alimentary mass undergoes the acetous and lactic fermentations, instead of being digested. These patients ought to abstain from all alcoholic drinks whatsoever till cured of their morbid condition.

More commonly it follows only wines, and some sorts of wines more than others. These cases deserve much thought, because they are in danger of falling into the snares of spirit drinking, and also because very often the patient's system specially requires a stimulus which yet he cannot take without inconvenience. When we reflect on the large quantity of free acid existing in wine, we cannot be surprised at its causing some trouble in the stomach. If a man drinks half a bottle of hock, he swallows one hundred grains of acid, equal to five table-spoonfuls of lemon-juice; in a pint of claret, eighty grains; in sparkling champagne or Madeira, the same amount; in port, if he takes even this comparatively large allowance, he does not get above sixty grains; but then in the three last there is nearly an ounce of sugar, which, mixed up with the food, has a strong tendency to ferment, and turn into a fresh portion of acid at a more advanced period of digestion.

Here chemistry steps in with valuable aid. In the simple instrument of a standard solution of caustic soda, we possess a means of

testing rapidly the whole acid contents of wines, and rejecting any which are thus declared unfit for our patient.

But it makes some difference what sort of acid is contained in the wine. Acetic is to many stomachs much less injurious than tartaric, and it is found that the proportion of these to one another varies very much in the products of fermentation. Thus, in Madeira nearly one-third of the acid contained is acetic; in port, only one-fourth; in claret, one-fifth; in champagne, one seventh; and in hock, not one-eighth, whilst the rest is the least digestible, tartaric, or its ally, racemic.* Besides these, the tannic must be allowed for, small indeed in quantity, but powerful in operation, as its use in medicine shows.

Of course, both the quantity of acid and the proportion of the several acids vary, within certain limits, in different specimens even from the same vineyard, and still more in growths classed under a common name in the market. So that to give an opinion as to the fitness of a particular wine for drinking, we must carry our investigation rather farther than merely the application of the soda test.

The acetic acid may be estimated by distilling it off from the wine slowly, at a moderate temperature, so as not to decompose the extractive, and measuring it by the standard alkaline solution.

Sugar in wine which is to be taken by itself as a medicine, is often beneficial by making the acid and alcohol less immediately irritating to the mucous membrane; but in that which is to be mixed with food it is very apt to increase the generation of acid in the stomach or cæcum to an injurious extent, generally two or three hours after meals. If an examiner of wine is disposed to reckon the absolute quantity of sugar, he will have to go to the expense of Soleil's saccharometer (which costs, with its accessories, not much under £20), and even then may have his analysis doubted by a chemist;† but a fair comparative valuation may be made by first neutralizing the acids with lime, and estimating the sweetness which remains by the taste. This is done by measuring the quantity of water which requires to be added before all trace of it cease to be perceptible to the palate.

The injurious effect of ill prepared effervescing wines is easily explained by the large quantity of undecomposed ferment they contain. This is set in action by the warmth of the alimentary canal, and can hardly be overcome even by the strongest digestive powers. Flatus and acidity are its normal consequences.

* See Mulder, p. 202. In 100 grammes of wine there were—

	Milligrammes of acetic acid	Milligrammes of tartaric, racemic, &c.
Madeira.....	167	310
Rhine wine.....	66	480
Port.....	95	283
Bordeaux ordinaire.....	86	390
Champagne.....	64	408

† The fallacy in Soleil's polarizing saccharometer as a quantitative test is, that uncrystallizable sugar rotates the ray to the left, whilst glucose and cane-sugar rotate it to the right. So that a sample of sherry, for example, with its usual allowance of the uncrystallizable, might be so adulterated with white lump, molasses, caramel, or malt, as exactly to balance and appear to contain no sugar at all.

The proverbial unwholesomeness of "mixing wines" is not explained by chemistry. In most cases the evil may be traced to the temptation to increased quantity, or to the taking of some sorts which, even if adhered to throughout the meal, would be equally hurtful. In fact, the precept of keeping to one wine seems to rest on the same principle as keeping to one meat.—*Brit. and For. Medico-Chirurg. Review.*

Poisoning by Hyoscyamus Niger, producing a Scarlatinal Eruption.

By ROBERT CRAIK, M.D., House Surgeon to the Montreal General Hospital, and Demonstrator of Anatomy in the University of McGill College.

I offer no apology for presenting the following case to the readers of the *Chronicle*, as any fact which can tend to throw additional light on the action of the *Solanaceæ* must be considered as worthy of being placed upon record. It is now largely admitted that one of the solanaceæ—belladonna—has the power of warding off that fatal scourge of families, scarlatina, and this prophylactic power would seem to be in some way connected with the production of a rash upon the skin, which that drug is known sometimes to produce. Stramonium is also known to have occasionally produced a similar eruption, but I have failed to discover any notice of such an eruption from the action of hyoscyamus. A case is mentioned in the 22d number of the *American Journal* (new series), in which three drachms of the tincture of hyoscyamus were said to have produced an eruption resembling *urticaria*, accompanied by great swelling of the upper part of the body; but as the tincture was prescribed for a pain in the abdomen, we may, I think, fairly attribute the *urticaria* to gastric irritation arising from some article of food, many of which are notorious for its production.

In July, 1857, I was called in great haste to see a child, two and a half years of age, who had swallowed some herb which had been taken from the yard of the Montreal General Hospital. The father of the little girl described her as being "out of her senses," and very much excited. Having observed a number of plants of hyoscyamus growing in the hospital yard, I suspected the nature of the poison at once. I sent the father home with a ten-grain dose of sulphate of zinc, with directions to administer it immediately on his arrival. I followed in about ten minutes, and found that the child had vomited slightly; the vomited matters consisted entirely of hyoscyamus seeds and capsules. The plant from which they had been taken was shown me, and proved to be a large one not quite ripe, and having the whole of the capsules stripped from the upper part and probably swallowed by the child, so that nearly an ounce of capsules and seeds must have been taken.

The symptoms were so peculiar and so well marked that poisoning by some one of the solanaceæ might have been diagnosed without any other evidence. There were the flushed and excited countenance,

the restless and violent tossing, amounting almost to convulsions, the momentary listening to imaginary sounds, and the eager clutching at visionary phantasms; while the brilliant eye, widely dilated pupil, hurried pulse, and labored respiration filled up the pitiful but interesting picture.

One other symptom I must not omit, for it was among the most marked of all, and certainly not the least interesting. It was a bright scarlet redness of the whole surface, exactly resembling that of scarlatina. It was not a mere flushing of the surface, produced by the unusual exertion, but a well-defined papillary eruption, disappearing on firm pressure, but returning immediately when the pressure was removed. The mucous membrane partook to some extent of the same appearance as in scarlatina, though the strawberry tongue was of course not so well marked.

Another dose of sulphate of zinc having been administered without satisfactorily emptying the stomach, a teaspoonful of mustard was given, followed by copious draughts of warm water, which soon had the desired effect, very large quantities of the poisonous substances being evacuated. After recommending strong green tea as a drink, and applying cold to the head, I left her, promising to call again in two hours.

On my return I found the delirium and other symptoms still active though not so violent as before, with occasional intervals of drowsiness. The eruption and the ocular delusions were as vivid as before.

I continued to visit her at intervals of a few hours during the night and following day, for the purpose of watching the decadence of the eruption, and I found that it, together with the ocular spectra, continued for about twelve hours from the time of taking the poison. Both then ceased gradually, and the child sank into a troubled sleep, interrupted by startings, twitchings of the muscles, &c., which did not entirely cease for upwards of twenty-four hours. The dilatation of the pupil continued for several days.

I watched the child carefully for some time, for the purpose of noting whether any attempt at desquamation would take place. On the fourth day numerous vesicles appeared on various parts of the body, resembling those of varicella. After remaining out for about two days they dried up, leaving scales which peeled off along with portions of the surrounding cuticle. The thick epidermis of the hands and feet, however, showed no sign of desquamation. There was hoarseness and considerable irritation of the fauces for some days, probably partly due to the local action of the mustard, which we had some difficulty in compelling the child to swallow. In ten days the child was as well as ever.

In thinking over the foregoing case, the following reflections have suggested themselves—1st, there is undoubtedly a considerable analogy between the actions upon the system of these solanaceæ and of the poison of scarlatina, and although the resemblance fails in many particulars, yet it is almost as well marked as that between the operation of vaccine virus and of small pox; 2d, as there is no doubt of the pro-

phylactic power of vaccinia, so we may fairly hope that the use of these solanaceæ may exert at least some influence in warding off or in modifying that terrible scourge—scarlatina; 3d, the case now narrated goes far to prove that hyoscyamus would prove quite as effectual as a preventative of scarlatina as belladonna, and, on account of its mildness as compared with the latter, its use would not be attended with the same risk. It may be a question, however, whether the dose of hyoscyamus would not require to be so much larger than that of belladonna as to render its use quite as hazardous. This objection would seem to be strengthened by the great similarity which exists in the composition of the active principles of the three most prominent members of the family of solanaceæ, a similarity so strong as to give rise to the opinion entertained until lately that they are identical. The question, however, can only be settled by actual experiment and observation.

In concluding this hasty and imperfect sketch, I would remark that no effort should be spared on the part of any member of our profession in contributing, however feebly, to the discovery of a prevention of scarlatina, nor should any motive of timidity deter from making public any fact which might further the end in view. By the discovery of Jenner one dreaded disease has been stripped of most of its terrors; let us, therefore, strive and hope that another enemy to our race equally fatal may be in like manner subdued.—*Montreal Chronicle*.

Death from Oil of Turpentine.

We extract the following case of suicide effected by means of oil of turpentine, from the Australian Medical Journal. The account is given by Dr. John Maund. Christison and Taylor were not acquainted with any case of poisoning, on record, by this agent. Flandin and Orfila are silent on the subject.

A female of 30 years of age, and healthy appearance, had for some months been living with a man as housekeeper and mistress, but from his signifying his intention of leaving her, she became low-spirited, and for a few weeks before her death indulged freely in the use of stimulating drinks.

On the day of her death a neighbor with whom she was intimate called to see her; she then appeared well, though a little excited, but by no means intoxicated. While conversing with the deceased, she noticed a soda water bottle, which she took up, as she thought it contained gin; at that time the bottle was nearly full, and contained turpentine. At the request of deceased she went to fetch her some meat from the butcher's; on returning shortly afterwards, not finding her in the kitchen or answering when called to, she put down the meat and left the house. Four hours after this witness had left her she was found dead, the meat and other things about the

room being in the same order as the witness saw them when she returned with the meat.

The position of the body, which had not been moved when I saw it, about forty hours after death, at once suggested to my mind that death had occurred from strychnine, the results arising from which I am quite familiar with, having made four post-mortem examinations within the last three years, when death had taken place from this poison. The deceased evidently immediately before death was sitting on the side of the bed, and, when found, seemed to have simply fallen backwards across the bed. The legs were rigid and stretched out before the body, and the soles of the feet were concave; the arms were bent across the chest, and great force was required to straighten or remove them from this position, the biceps muscle being forcibly contracted and very hard. The body assumed the state of opisthotonos, and all portions of it were rigid, the thighs least so. The eyes were open and prominent, and pupils slightly dilated; the jaws were fixed and could not be opened; the skin generally was pale, but of a livid hue in places, particularly about the head. The general appearance of the body was such as to give the idea that death had occurred suddenly from tonic spasm; there was no derangement of the dress or bed clothes to indicate convulsive action, and no external marks of violence. An empty pail was found on the floor close to the deceased, which probably she had placed there in case sickness should occur.

The internal organs of the body presented the usual appearance of a person dying from asphyxia. The membranes of the brain and upper portion of the spinal cord were found greatly distended with very dark-colored blood of a sizzly consistence, but it had no unusual smell. The brain was not softer than natural, but was, to a less extent than its membranes, congested with blood of the same character. The mucous membrane of the trachea was rendered quite arborescent by the ramification of a net work of distended vessels, but in the interstices the membrane was of the usual color. The lungs were gorged with blood of the same dark appearance as was found in the membranes of the brain. The cavities on the right side of the heart were distended with blood, the left also contained a small quantity of blood; in both sides it was of equally dark color. The liver and kidneys were congested, but to a less extent than the organs before mentioned. The bladder was empty and firmly contracted, but appeared healthy. The stomach and bowels were examined last. Immediately on the stomach being opened, a most powerful smell of turpentine became evident, which had not before been recognized; this organ contained a small quantity of thick fluid, which had the appearance of an emulsion made with turpentine and mucilage. The duodenum and upper portion of the jejunum were considerably congested, and the smell of turpentine was evident in all portions of the intestinal canal.

A further examination of the stomach and its contents showed that its mucous membrane was congested, and several very large vessels injected with very dark blood were found passing from the cardiac to near the pyloric extremity, and in several places close to these vessels

small ecchymosed patches existed. The contents of the stomach amounted to three ounces; it was of a semi-fluid character, and globules of what appeared to be oil of turpentine were seen to be intermixed with the more tenacious contents. Distilled water was then added to it and thoroughly mixed together; three hours afterwards there was found swimming on the surface a limpid fluid, which was removed by a pipett, and was found to consist of oil of turpentine, of which there were six drachms. The remaining contents of the stomach were then examined for strychnine, but none was discovered in this, the parietes of the stomach, or mixed with the turpentine which had been removed. Under the microscope the solid contents were seen to consist chiefly of wheat and potatoe-starch corpuscles.

The house was carefully searched, as soon as the deceased was discovered, to ascertain if poison of any kind could be found, or if any vessel was soiled by any unusual fluid; neither, however, could be discovered. The bottle containing turpentine was found on the shelf, where the witness said she saw it before leaving to fetch the meat for deceased; the quantity removed from the bottle was about six ounces; whether the whole of this was swallowed it is impossible to ascertain, but it seems highly probable that the portion taken was drunk directly from the bottle. No smell of turpentine in the house, or suspicion of its having been taken, existed till the stomach was opened.

The deceased, it seems, had several times hinted that she would destroy herself, but this threat did not appear to have excited any serious apprehension that she intended carrying it into effect.

Report of a Case of Albuminuria.

The "*Dublin Hospital Gazette*" contains the following report of a case of Albuminuria, which was permanently cured by Iron. It is reported by Dr. Cathcart Lees.

"Patrick Smith, aged 40, a coachman of temperate habits, was admitted under my care, into the Meath Hospital (February, 1849), for general dropsy. He had been attacked, the night previously, with convulsions, stated, by a medical man who had seen him, to be of an epileptiform character; but on admission he was gradually recovering from a state of stupor, and could answer questions. His face was remarkably pale and ghastly; his body, and both upper and lower extremities, very anasarcaous; skin dry, tongue red; pulse 76, regular; great difficulty of breathing, with muco-purulent expectoration, and râles over the entire of both lungs. He complained of pain across the loins, and also of frequent sense of vertigo. The urine was passed in natural quantity, feebly acid, of a dark-brown appearance; specific gravity, 1.010; highly albuminous with heat and nitric acid; very deficient in urea. The sediment, under the microscope, consisted of blood discs, renal epithelium, and casts of the tubes, both entire and broken up. He had been taking mercury for the dropsy, and was

under its influence when admitted. I learnt that he had enjoyed good health until three years ago, when he was treated for disease of the liver, and cured. He remained well up to eight weeks since, when, after exposure to wet, he was attacked with diarrhœa; and, on its subsiding, his feet and legs began to swell. In a few days his body and face became dropsical, with very scanty and high-colored urine. The heart was acting strongly, but there was no sign of valvular disease. I considered this a case of sub-acute congestive desquamation of the uriniferous tubes, with the secondary head affection, so often met with in the disease; I therefore ordered him to be dry-cupped over the loins, and as the bowels were confined, to take half a drachm of compound powder of jalap and an eighth of a grain of elaterium. This caused gentle watery evacuations from the bowels. I allowed him sago, with a small quantity of wine; and then, even though he had general bronchitis, I gave him ten grains of the ammonio-tartrate of iron three times a day. This was followed by the happiest results: his breathing improved; he had no return of convulsions, nor vertigo. I then gave him a vapor bath twice a week, clothed him in flannel, and kept him on the constant use of the iron for three months, with an occasional purge of the compound jalap powder. The anasarca disappeared entirely; the urine became perfectly clear; the specific gravity rose to 1.015; and though a trace of albumen could still be detected, and an occasional sediment of epithelium, with one or two casts of the tubes, yet the man considered himself cured, left the hospital, and was seen by one of our students working as a railway laborer, and apparently enjoying good health.

"He was re-admitted on April 19th, 1858 (*i.e.*, nine years after), in a state of great anæmia from loss of blood by the rectum, caused by vascular tumors in that part; but he had not any dropsy, and stated that he had continued free from it, and able to perform his daily work, till a short time previous to his admission, when the great bleeding from the rectum forced him to desist. I was naturally anxious to have his urine carefully analyzed, though it appeared perfectly normal and was free from any deposit, no epithelium, or even a tube-cast being visible under the microscope, but its specific gravity was lower than normal, being only 1.012. This was kindly performed by Prof. Sullivan, who found, to my great satisfaction, that it was quite free from albumen, and otherwise perfectly normal, except being somewhat deficient in urea, which accounted for the low specific gravity.

"I considered this case worth recording at the time, as showing the good effects of the treatment by iron in so early a stage of the disease, even though the condition of the urine and the pain in the back indicated congestion of the kidneys; and when, also, the case presented the symptoms and physical signs of acute congestive bronchitis, with profuse muco-purulent expectoration; but I now regard it of especial value, as proving the *permanent* good effect of this medicine in a class of diseases which are considered by many persons as almost incurable. An important feature in the early history of the case was the fact of convulsions coming on while the patient was under the influence of

mercury, which tends to confirm me in the opinion I have long entertained from what I have observed in similar cases, and which I find corroborated by Drs. Bright and Barlow, of Guy's Hospital, in their last report on the subject, in which they state that 'mercury is not only an inefficient, but in all probability a dangerous remedy in those cases in which the renal disease was the primary and principal affection.' But though I protest against the general use of mercury in this disease, yet we may use it occasionally as a purgative in combination with other medicines, or even as a diuretic if the dropsical effusion be excessive, and we have failed to give relief by other medicines."—*Medical Circular*.

Employment of Sugar in the Diseases of Infants, and its Utility in Intestinal Catarrh. By Drs. BEHREND and SIEBER, of Berlin.

In the *Presse Medical Belge* is an interesting paper on the use of sugar in the diseases of infants, a portion of which we abstract. The authors refer to the writings of Sala, Pelletier, Hoffman, and many others in support of the utility of the remedy.

The ordinary cane sugar is employed with our general dietetics in consequence of its agreeable taste. During the last century many of the older authors spoke in high terms of the therapeutic action of sugar, and recognized in it many properties of utility in the treatment of divers maladies. In later times, and after the prosecution of many physiological researches, and the presentation of their results, we are now taught that the opinions of the old physicians were well founded and rational. We now know that, by the reactions of this agent with the liquids of the stomach and intestines, it is transformed into lactic and butyric acids direct. To the researches of Lehmann we are mainly indebted for the information we now possess, and are made cognizant of its interesting and remarkable changes and effects on the animal economy from its agency and its mutative action on medicaments.

Without further prelude we will now cite two cases which came under our treatment some six years since, and which will serve to show what may rationally be expected from it as a therapeutic agent.

During the epidemic which prevailed in this country in 1851, and which manifested so much activity in the derangement of the intestinal functions, both in adult and infant life—and attended with high febrile action—we had many opportunities for observing the salutary effects of the remedy.

A child three years of age, of a scrofulous habit, was seriously attacked with the prevailing disease. An intense fever declared itself at the outset, which was soon followed by copious diarrhœa, attended with violent colic pains, and soon afterward by excessive abdominal tenderness. An acute inflammation was manifest, which was combated with an antiphlogistic course, to which it soon yielded. The diar-

rhœa persisted, with great irritability of the stomach, and the expulsion of a light flocculent matter; a nutrient treatment was adopted to support the sinking patient, but all ingesta was rejected instantly, and it was easy to foresee that all the usual remedies in such cases would be applied in vain. The efforts at vomiting continued; the stools were mixed with mucous filaments slightly colored with bile, and at times streaked with blood; their odor was acid but not strong.

The child was now put upon sugar and water, which it ate with a ravenousness and voracity most remarkable. This peculiarity, and the apparent assurance it gave of adaptability in this case of intestinal catarrh, determined us, for the first time, to employ this method of treatment. To effect its exhibition in a convenient manner it was given in the form of pulv. blanc. sac., one half oz. slightly moistened with water, each hour. This treatment was continued four hours, and was tolerated. At night the same treatment was continued, the patient to have sweetened water whenever disposed to drink. No other medication was employed. On the fifth day the abdominal pains had ceased most completely; the diarrhœa still continued, but the stools were less copious and frequent, and contained fecal matters. The treatment was continued, with the addition of light nutrient fluids, which we now found feasible, and, as the patient recovered, beef tea was given. The treatment, for nine days, consisted of sugar in a humid state, and to its effects we are disposed to consider the cure attributable, and not to other medication.

Soon following the above case, another child, aged four years, was presented with the same disease. It had become very emaciated by the wasting diarrhœa, and, when first presented, was writhing with the violent colic pains attendant on the disease. The patient was placed upon the same treatment in all respects as the former, and at the end of five days the stomach would tolerate other light nutriment, followed by beef tea, as in the first case. In three weeks the cure was perfect. During the last two weeks the quantity of sugar administered was diminished daily.

These two cases go far to establish the value of the remedy as a therapeutic agent, and when we regard the opinions of the older writers upon this subject, it seems evident that it has long been a useful but neglected adjunct in the treatment of peculiar diseased conditions. —*Pacific Med. and Surg. Journal.*

Dysmenorrhœa, and Sterility resulting therefrom.

In the *N. O. Med. News and Hospital Gaz.* Dr. E. D. Fenner has a paper from which we obtain the following ideas: He obtained and has long used a *recipe* for dysmenorrhœa, which has shown itself of much value. It was originally obtained from a work by Dr. Falk, of London, and is as follows: *R.*—Gum guaiac, balsam canadens., àà ʒj; ol. sassafras, fʒij; hydrarg. bichloride, ʒj; alcohol, fʒviij. Dissolve the

guaiac balsam in half the spirit, and the corrosive sublimate in the other. Let the first digest for several days, pour off the clear liquor, mix with that containing the sublimate, and add the oil.

Dose—Ten or twenty drops night and morning in a glass of wine or water.

Other practitioners have found it of much value, and on page 189 of *Ellis' Med. Formulary*, he found it placed and recommended as an alterative by high authority, and also as a remedy for lues venerea.

Dr. Fenner usually directs, "a day or two before the expected period, twenty-five drops night and morning, in an infusion of sage or sweetened water, until the discharge is freely established, then cease." Severe cases may require it ten days before, and if the pain appears it should be taken every four or six hours till relieved.

If the pain is very persistent, he uses an anæsthetic, or the following: *R.*—*Spt. camphoræ*, fʒiij; *chloroformi*, fʒij; *tr. opii*, fʒj; teaspoonful in sweetened water every hour. Dysmenorrhœa being relieved by this treatment, conception almost invariably follows in married women. He gives several cases of much interest, in each of which the relief was speedy and permanent.—*Med. and Surg. Reporter*.

Sedatives in Diseases of the Womb and Morbid Menstruation.

Dr. E. J. Tilt, Senior Physician to the Faringdon General Dispensary and Lying-in Charity, advocates, in the *Lancet*, the beneficial effects of sedatives as applied to the womb. In cases of ovario-uterine neuralgia he uses:

R.—Camphorated liniment, fʒiv.
Tr. opii, fʒss.
Tr. aconiti, fʒij.—*M.*

Rubbed carefully for about five minutes on the lower portion of the abdomen, or sacral region, or both, if the pain is referred to both localities. This should be allowed to remain, and covered with a "wadding poultice," and kept in its place by oiled silk, applied around the abdomen, enveloping its lower part, thus forming a "sedative vapor bath." If this should be found ineffectual, sedatives may be administered by the rectum; as Battley's solution, fʒj; *tr. hyoscyami*, fʒj; *aq. fʒiij*; placed in an India-rubber bottle, filling up with warm milk, and injected into the rectum twice a day. If necessary, we may add *tr. belladonna* fʒj, or *tr. aconiti* ʒj—ij, to the above. It may also be used as a vaginal injection, though by the rectum it is preferable. In a case of much irritation, he applied a grain of acetate of morphine, wrapped in cotton, and tied with twine of sufficient length to project from the vagina, in order to facilitate its removal. This he introduced by the aid of a speculum and forceps. In two or three days he introduced two grains in the same manner, and four days after, three grains, with much benefit to the patient. The anodyne was dissolved by the fluids in the vagina, and the solution thus produced acted gent-

ly on the uterus. Dr. Aran, of the *Hôpital St. Antoine*, follows the same idea. He lets fall a drachm or two of tinct. opii into the speculum, fixing the fluid in the vicinity of the womb by a tablespoonful of powdered starch. He repeats this every second or third day, and has never seen it followed by narcotism. This he has found very effectual in uterine and ovarian neuralgias, subsequent to inflammatory affections, or uterine deviations.

For the last six years, since Dr. Tilt has known the plan of Dr. Aran, he has, on concluding any surgical treatment, poured down the tube of the speculum a drachm of Battley's solution, and used the powdered starch to keep it *in situ*; and this even when no pain is complained of, as he considers it favors the rapidity of the cure. He prefers, however, as a general rule, the salts of morphia, used as above. *Med. and Surg. Reporter.*

Cannabis Indica in Delirium Tremens. By JOHN E. VAN MOLLE, M.D.

On the 11th of July I was called to see Mike S——, a man of some 45 or 50 years of age, and who for a long time had been in the habit of drinking periodically. On this occasion he had been on a *spree* for a couple of weeks, and was obliged to quit for 5 days, his stomach being unable to bear the fiery potion, or even any kind of nourishment. He was very weak, with a frequent and small pulse, the skin covered with a cold and abundant perspiration; his mind was deranged, the hallucination being that several persons were pursuing him to take his life, and he made several attempts to throw himself into the river. When I saw him he was very much dejected and startled by every noise, the tremor of his limbs was excessive. I prescribed Ext. Cannabis Indica, grs. xx, to be divided in 5 pills, two of these to be given at once and one every successive hour.

Upon visiting this man one hour after the administration of the last pill, I found the pulse much improved, being less frequent and fuller, the tremors had also subsided to a certain extent, but there was no change in his mental aberration, nor had sleep been induced. The recipe above was renewed, and given in the same manner. In the morning Mike was physically better, but the mind still in the same condition, and he had not slept. The extract of hemp was continued, and it was not until after twenty grains more had been taken that its specific effect was produced. About noon I was called in a great hurry to see him, the messenger saying that he was in convulsions. When I arrived the fellow was laughing, and had been talking of his *old times* and *Green Erin*. After enjoying for some time the influence of hashisch, he fell asleep and remained in this state for twenty hours. At my visit the following day, Mike was a well man. His pulse and skin were natural, no tremor or hallucination, and with the aid of good nourishment he will regain his former strength. He was the happiest man on earth while under the specific effect of the Cannabis Indica.

We desire to call the attention of the profession to the fact, that

it was the specific action of the Indian hemp alone, which overcame the existing hallucination in this case of delirium tremens, and besides, that sleep occurred only after its influence had been fully developed.

If we examine the cases related by Dr. Godfrey, we find that a great amount of excitement existed in each of them, this excitation having occurred *directly after* hard drinking. We see also, that the doses were very minute, and that a very short time elapsed before profound sleep was induced. The difference of effect between these cases and the one above related is very striking, but this may be easily accounted for if we consider the difference in the diseases. As a narcotic, it was formerly given in the dose of from 1 to 5 grains, whilst to produce its specific effect upon the brain, it may require, as we have seen, as much as 60 grains, according to the condition in which the patient is.

We conclude that in Dr. G's. cases it acted as a narcotic, removing simply the excitement produced by hard drinking, whilst in our case, which was one of delirium tremens, the specific action of the haschisch was required to re-establish the equilibrium of the mental faculties, which being effected, the subject as a natural consequence fell asleep, having been deprived of it for several days.—*Oglethorpe Medical and Surgical Journal*.

Belladonna as a Means of Suppressing the Milk. By EDMUND SEYFARTH, M.D.

MESSRS. EDITORS—In the last number of Vol. LIV. of your valuable journal you quoted a statement of Mr. Gibbon in the *Lancet*, on the suppression of the secretion of the mammary glands by belladonna. In your number for July 15th you express the wish to hear of experiments made with this drug in like cases, which induces me to give you my experience in three cases, in which I employed belladonna for the above named purpose.

The first case occurred to me at Rindge, N. H., my former place of residence, only a few weeks after the above quotation in your journal, when I employed flannel compresses moistened with a solution of the extract of belladonna. The secretion of milk had commenced two days previous to the birth of the child, which died four days after delivery, under symptoms of cerebral pressure. The child having been laid on the breast four hours after birth, nursed from time to time, until a few hours previous to its death. The milk being very abundant, and continuing so during three days after the child's death, was repeatedly drawn by the pump, and the above-named compresses were continually applied, when the secretion soon ceased, leaving the nipples slightly sore to the touch, probably from the application of the breast-pump more than anything else. The solution of belladonna was discontinued at the ninth day from its being used, leaving the breasts in a good and healthy condition.

The second case occurred in the wife of the undersigned. The child died sixty-two hours after delivery. The secretion of the mammæ

commenced on the morning of the second day. The same applications as in the first case were made during eight days, when the secretion ceased. There was no soreness of the nipples, but some indurated nodules were felt in several parts of the breast during the first few days, which melted under the use of castor oil carefully rubbed into the hardened parts.

CASE III.—Mrs. R. B. Phillips, Keokuk, Iowa. The child, aged 13½ months, died from the effects of dentition. The breasts, the third day after the child's death, were very hard and painful. Castor oil was used as an embrocation, and the milk was extracted repeatedly. I then made use of a strong infusion of the fresh leaves of belladonna, which were near at hand, applying it as above. A decided improvement was visible after the first few applications; the breasts becoming soft and less tender, ceased to secrete by the first day after the applications.

Here are three cases in which belladonna has acted favorably in my hands; and although the question, "*would the secretion not perhaps have ceased spontaneously?*" remains in some measure still open, the above result will induce me to a similar treatment in similar cases; the more so, as in two cases out of three the breast-pump was deemed necessary, which thus far was an interference with mother nature; but, notwithstanding this always more or less irritating interference, the cases improved, as rapidly as could be desired.—*Boston Medical and Surgical Journal*.

EDITORIAL AND MISCELLANEOUS.

—The following strictures upon the "Annual Report of the Homœopathic Dispensary, 654 Sixth Avenue, New York," we have received from an esteemed correspondent, to whose inquiries we briefly reply, by saying, that we have no personal knowledge of this institution, but believe it to be a private charity. The numerical results reached by the author of this report, we opine, are unworthy of the slightest confidence or any attention, except as consequence is given to them by the literary press. As this has been done, we give place to the showing up of our correspondent, who displays in an admirable manner the fallacy of such statements:

The report of Dr F. W. Hunt, General Superintendent of the Homœopathic Dispensary, 654 Sixth Avenue, New York, is before us. It contains one or two statements that require notice. Dr. Hunt says, "I have been *peculiarly* anxious to compare the results of the new system of practice with those which are *uniformly* reached by the

best devised measure of the *old school*. I have, therefore, taken the greatest care to obtain a full history of every case, and the actual result of every prescription."

We do not know what there is "peculiar" about Dr. Hunt's anxiety, and we certainly have yet to learn that the best devised measures of regular medicine have reached any "uniform" numerical results. When Dr. Hunt designates regular medicine as the "old school," he doubtless means it as a word of reproach, synonymous with old foggyism and lack of progress. Will Dr. Hunt please tell us where there is a class of men laboring more zealously and with more satisfactory results to advance physiology, pathology, pharmacy, special and general therapeutics, than are the members of the regular profession? This insinuation of Dr. Hunt reminds us of a direct charge once made by a so-called eclectic: "Old school practitioners," said he, "are tolerably well acquainted with disease, but they are entirely behind the age in practice—they do not keep themselves posted in regard to the improved methods of treatment." This same eclectic never attended a medical lecture, had not ten dollars' worth of medical books in his house, and never took a medical journal!

Dr. Hunt reports as follows: "whole number of cases, 1,384; number known to have been cured, 1,047; relieved, 72; results unknown, 46; died, 5; remaining under treatment, 68." Notwithstanding the Dr.'s boasting determination to "give a full history of every case, and the actual result of every prescription," he reports more than five per cent. "*result unknown*." These 46 were not among the cured, nor even among the relieved, but, evidently, among the unrelieved that were sent away to die; or (what would be better for Dr. Hunt's "peculiar" anxiety) to swell the mortality record of some other hospital.

The object of the present writing was principally to call attention to the following statement: "On reviewing the entire catalogue of cases, we find that not one death has occurred among those that were subjected *exclusively* to homœopathic treatment." This statement, dishonestly made, was designed to charge all deaths to regular medicine, and to claim for homœopathy a uniformity of cure. But the unwitty statement is fatal to his whole purpose; for it distinctly avows that he does not practice exclusive homœopathy, or that he dispenses in conjunction with those who administer something besides infinitesimals, and that he is dishonest enough to claim all cures for homœopathy, and charge all deaths to the other medicines administered conjointly. He that is dishonest enough to make the statement above quoted, is dishonest enough to make false figures. Will Dr. Hunt please tell us how many

of those that recovered "were subjected exclusively to homœopathic treatment?"

But Dr. Hunt's audacity culminates when he classes small-pox with those diseases that "have never been satisfactorily treated by any who have disregarded the discoveries of Hahnemann!" Where now are Jenner's honors? Where is the fame of him who, with a scratch of his lance, virtually annihilated that scabby pestilence? We hope Dr. Hunt will not go and tear down that Jenner statue that now stands in Trafalgar Square.

O. C. G.

—*Malakoff*, the Paris correspondent of the *New York Times*, who is a physician, writes in one of his letters about the Nursery Houses in Paris, as follows:

There are two institutions in France for the children of the poor which do not exist in America, and I believe not in England. They are the Bureau for Nurses and the *Crèches*, or Nursing Houses. Both are Government establishments. The Bureaus for Nurses are under the management of the Police. A doctor is attached to each establishment, whose duty it is to examine carefully the physical condition of each woman who presents herself for employment. On the doctor's certificate the woman is granted by the director a small book, called a *livret*, in which are registered her name, residence, age, the number of children she has had, the date at which her last child was born, her defects as a nurse, if she has any, and other information. Without this book, signed and stamped, she can get no employment. The price of nursing varies, according to the age of the nurse and the distance she lives in the country—from fifteen to thirty francs a month—the mother furnishing the clothes and paying all doctor's bills incurred by the child's sickness. But these bills are regulated by law.

At the *Crèches*, or Nursing Houses, established in all parts of the city, the poor carry their infants to be taken care of during the day, so as not to interfere with the labor by which they gain their living. They are taken care of from 8 o'clock in the morning till 6 in the evening at the rate of four cents a day, paid in advance each day. This speculation is so profitable that a private company has organized several establishments on their own account. They are under close police surveillance, however, and, indeed, if they were not they would have difficulty in obtaining the confidence of the public.

—The course of Lectures on Obstetrics by Dr. Wm. Tyler Smith, which first appeared in the *Lancel*, and were afterwards collected and republished, with additions, in the form of a Manual of Obstetrics, is soon to be issued by a house in this city. Dr. A. K. Gardner, of New York, is the editor of this reprint, and has retained the original lecture form, with all the new matter contained in the Manual. To this he has added several lectures of his own, making the work a very complete one on that branch of the profession. The article found in our pages

this month constitutes one of the additions made by Dr. Gardner. The text is illustrated by very numerous cuts.

—Each year, with the approach of midsummer, our city is supposed to be threatened with some dire pestilence. Rumors from within or rumors from without settle upon us as a sure thing the prevalence of some terrific disease, such as small pox or yellow fever. The latter is sure to appear simultaneously with its presence at Charleston or New Orleans, and the rise and progress of the disease seem to depend entirely upon the course it takes in these Southern cities. There is something peculiar in this, which needs investigating. It is true that at the present time this fearful scourge is sweeping off its victims in both the above named cities, and that certain cases are reported here. But neither the sanitary condition of this city—neither the telluric nor the atmospheric conditions are in a favorable state for the fostering of this disease, nor will the increase in the commerce of our harbor account for the increased anxiety which is manifestly felt upon this subject. It would seem that the facilities of communication of thought had something to do with this anxiety, for as the telegraph flashes the news of the rapid progress of the epidemic in New Orleans, the sympathizing hearts of those here, who feel themselves peculiarly exposed, work the blood coursing through them into a fever heat, and we find the expression of their fears in the many rumors which constantly startle us, of the actual prevalence of yellow fever.

From the position which New York enjoys as the greatest commercial city of this continent, it must be necessarily exposed to receive many cases of infectious diseases from the crowds of arrivals coming from all portions of the globe. Notwithstanding this, the health of the city is in a most favorable condition, and will compare well with that of any city in the Union. The few cases of yellow fever, which have given occasion to renewed attacks against quarantine and its arrangements, can be satisfactorily accounted for, and whoever will take the trouble to scan closely the ex parte statements even, will observe that other motives than those of anxiety for the public health have affected the wonderful sensitiveness of those who discover an epidemic in a few sporadic cases, and by the dint of agitation excite a community to rebellion.

The quarantine grounds of this port are so situated, that their occupation for this purpose materially interferes with the monetary operations of some individuals. The result of this is, that the true history of yellow fever at this port can never be correctly arrived at. An unbiased statement from those who reside in the neighborhood of

Quarantine, relative to the means of the extension of the fever beyond the limits of Quarantine, cannot be expected, and every investigation by a third party will be surrounded by such difficulties as to prevent such a thorough research as is desirable. That a better location for these buildings might be found is beyond dispute; but that the occupancy of their present position is endangering the health and prosperity of this city to so fearful an extent as is represented, is the effect of a distorted vision, which sees results only through the magnifying glass of self-interest.

— When the operation of injection into the bronchial tubes for diseases of the air-passages was first proposed in this city, it met with much opposition.

The MONTHLY has published the full accounts of this discussion, and has also given a full record of the history of this operation. The proceedings in the Paris Academy of Medicine, in discussing the paper of M. Loiseau upon this subject, have already been given, and to it we add the following history of a case operated upon by Prof. Griesinger, of Tübingen, and reported by Dr. Gerhardt to the *Deutsche Klinik*. We extract it from the *Gazette Hebdomadaire* of May 12th, 1858.

Kramer, 25 years old, a shoemaker, resident at Entengen, of a family not at all disposed to tuberculosis, and who had never been sick, was attacked with typhus in September, 1846, which lasted three weeks, no symptom of disease of the chest arising. Since then, however, from time to time, there has been some cough, and a considerable irritation about the larynx. In autumn and spring the expectoration became more abundant, and continued thus notwithstanding the most varied medication. The fetid odor of the sputa was only noticed when it became very abundant, since when it has persisted in having this odor. The strength of the patient remained quite good—to such a degree that he continued at his work up to the summer of 1857, and had even borne arms at several different times. No marked diarrhœa or sweats; nutrition and the digestive function perfect. Although pale, some spots were observed upon the face of the patient highly injected, particularly the cheeks, the lips, the ridge of the nose, the conjunctiva, signs of a stasis in the venous system. The thorax is well formed, the supra and sub-clavicular spaces well filled; the respiration appeared normal. In front and to the left near the sternum, upon a level with the second and third ribs, there is a depression, a slight retraction of the walls of the thorax, which was slowly developed about the third year of the disease. Upon percussion a slight dullness was discovered over the precordial region and the supra clavicular

spaces, and upon a level with the depression a sound a little different from that which is given by the same point on the opposite side; but upon the right side the sound is particularly obscure behind and below, beginning with the middle of the shoulder blade. Auscultation reveals upon the left side, at the point of the thoracic depression, a feeble râle consonating with bronchial expiration; upon the right side and below uninterrupted gross râles are heard; beyond these points the respiratory sounds are normal. Expectoration is very abundant and easy. The sputa are full of air bubbles, consisting of muco-purulent masses, quite fluid, ordinarily of a yellow color. The fetid odor which proceeds from them resembles at times that of stercoral matter; this result is effected by certain changes in their chemical condition, according as the reaction of these liquids is more or less acid.

The two sides of the chest are symmetrical, except at the point of the depression which we have mentioned; but at this spot the sound upon percussion is more physiological than elsewhere. As to the seat of the exaggerated mucous secretion, the patient believes that he distinctly feels the expectorated sputa to come from the right side particularly; still these results do not warrant us to conclude upon the existence of a bronchial dilatation, and this case has this particular point, that the anomalous secretion is the primitive phenomenon. This supposition is confirmed by the progress of the expectoration, which is always the same, and by those interruptions which are constantly evident in the circumscribed dilatations of the small bronchial canals.

The complete absence of hæmorrhage in the sputa removes every idea of ulcerations existing upon the dilated surfaces. Finally, the diagnosis can be stated thus: Dilatation quite uniform of the bronchial tube, particularly in the right inferior lobe, with induration of the surrounding tissues and hypersecretion of the mucous membrane.

After having employed in vain the balsamic and other preparations, by inhalation as well as interiorly, Prof. Griesinger decided to try the treatment proposed by Drs. Green and Bennett. The following was the method pursued: From the 16th to the 22nd February, a sponge fixed upon the end of a whalebone staff was introduced twice a day, at first upon the epiglottis, then through the glottis.

The 8th March, an elastic sound was carried down, deeper and deeper each day. 19th March, the sound could be introduced very freely. The experiment with the flame of a candle proved that the operation had succeeded, and a solution of nitrate of silver was injected. (The solution can vary from 50 centigrammes to 1 gramme and

more for 30 grammes of water.) This operation was repeated the 21st at the clinique.

The author reports upon this occasion the unsucccess of Dr. Bennett, and the objections to this operation by Friedreich and Erichsen, who have asked if it is not imprudent and dangerous to introduce a sound through the larynx, and who even doubt that the instrument can really be introduced into this organ. "For us," says the author, "after the experiments we have made, we can now affirm that these fears are illusory, and that the different portions of the operations can be performed with a rigorous exactitude. As to the patient," adds he, "who is the subject of this observation, we shall continue to treat him in the same manner, and shall publish the result, whatever it may be."

—We are happy to announce that the articles on "Favorite Prescriptions by Living American Practitioners," which have from time to time appeared in our pages, and one of which will be found in the present number, have been collected and will soon be issued from the press, with new matter, in one volume of over 200 pages.

These articles have received much favor from the periodical medical press, both in this country and abroad. The volume will no doubt be gladly welcomed by those who desire to preserve these prescriptions in a form convenient for reference. Wiley & Halsted are the publishers.

—We have received the first number of *The Medical Journal of North Carolina*, edited by Dr. Edward Warren, and published under the auspices of the State Medical Society of North Carolina. It is a bi-monthly of 100 pages, at Three Dollars a year; of neat typographical appearance, and giving in its initial number an excellent warrantee of its future usefulness and success. To the editor we wish a never-ceasing aid from the profession of the State, under whose auspices he puts forth this venture.

This is the only medical journal in North Carolina, and we believe the first ever instituted there; we trust the profession of the State will heartily respond to the appeal made by the editor.

A Specific for Scabies.—At the last meeting of the Academy of Science, Paris, M. Bonnet, of Epinal, sent in a paper announcing that benzine is a specific for the itch. The author of the paper states that if benzine be rubbed on the parts affected, and also very slightly on the other parts of the body, a cure will be effected in the course of five minutes, after which time the patient may take a warm bath for half an hour. Nevertheless, in cases where the itch is accompanied with a secondary eruption, the latter will require a separate treatment.

Medical Epitaphs.

A prolonged medical statement of the diseases of which the departed may chance to have died is extremely popular. At Acunon, in Cornwall, says a writer in *Household Words*, there is this particular account of how one Mr. Moreton came by his end:

“Here lies entombed one Roger Moreton,
Whose sudden death was early brought on;
'Trying one day his corn to mow off,
The razor slipped and cut his toe off;
The toe, or rather what it grew to,
An inflammation quickly flew to;
The parts they took to mortifying,
And poor dear Roger took to dying.”

And here is a still more entertaining one, upon a certain lady in Devonshire, singularly free from any nonsensical pretence or idle bravado:

“Here lies Betsy Cruden,
She would a leaf'd but shee cooden;
'Twas na grief na sorrow as made she decay,
But this bad leg as carr'd she away.”

There is a distressing inaccuracy of metaphor in the following south county elegy; but the meaning is painfully distinct:

“Here lies two babes as dead as nits;
They was cut off by ague fits.”

A doctor of divinity, who lies in the neighborhood of Oxford, has his complaint stated for him with unusual brevity, as well as his place of interment:

“He died of a quinsy,
And was buried at Binsy.”

To complete these medical extracts, I may quote this warning cypress flower, culled from a Cheltenham Cemetery:

“Here lies I and my three daughters,
Killed by a drinking of the Cheltenham waters;
If we had stuck to Epsom salts,
We'd not been a lying in these here vaults.”

New Hæmostatic.—After prolonged experience, M. Lami strongly recommends the following hæmostatic: *R. Decoct. rhataniæ*, 300 parts; alum, 60 parts. If the mixture is to be given internally, 70 parts of syrup are to be added. When given internally, 10 drachms may be taken three times daily; while for external use it may be employed as an injection or lotion. Its action is prompt and efficacious in almost any variety of hæmorrhage.

Curative Effects of Pregnancy on Prolapsus Uteri.—M. Brachet relates some cases in proof of the fact, that while the ordinary modes of treating prolapsus uteri by means of pessaries, abdominal belts and the like, almost always fail, a cure may not unfrequently be procured if the patient fall pregnant again, and then be confined to her bed, for a period not less than forty days after delivery.

Raw Meat in Dysentery.—Dr. Weisse, of St. Petersburg, first in 1845 advised the employment of the lean of raw meat, very finely minced, in the chronic diarrhœa of children, giving two teaspoonfuls four times a day. Since then, the same practice has often been extended to various forms of obstinate diarrhœa with good effect. In the present paper, M. Pensa, now practising in Egypt, reports the benefit he has derived in several cases of severe dysentery occurring in the adults from the employment of raw or nearly raw minced meat, given in doses of from two to three ounces three times a day.

Valerianate of Ammonia for Epilepsy.—In Salpetriere and the Bicetre at Paris, the following formula has been much used in epilepsy for years:

R.—Aqua distill.,	pts. 95
Acid. valerian.,	“ 3
Sub-carb. ammon., q. s. ad neutral. acid. adde.	
Ext. alcoholic valerian,	pts., 2

Mix dose, teaspoonful three times a day.

Books and Pamphlets received.

Journal de la Physiologie de l'Homme et des Animaux publié sous la direction du Docteur E. Brown-Séquard. Nos. 1 and 2. Paris, J. B. Baillière et Fils. New York, B. Westerman & Co., Agents.

Bucknill & Tuke on Insanity. Lea & Blanchard, Philadelphia.

Lallemand & Wilson on Spermatorrhœa. Lea & Blanchard, Philadelphia.

Archives of Medicine. Edited by Lionel P. Beale, M.D. No. 2. London, John Churchill.

The Mott Surgical and Pathological Museum.

Annual Report and Circular of the New Orleans School of Medicine. New Orleans, 1858.

Twelfth Annual Catalogue and Announcement of Lectures of Starling Medical College, for the Session of 1858–59. Columbus, 1858.

Transactions of the 29th Annual Meeting of the Tennessee State Medical Society, held at Nashville. Nashville, 1858.

The Sanitary Review and Journal of Public Health; including the Transactions of the Epidemiological Society of London. Edited by Benjamin W. Richardson, M.D., &c. London, July, 1858.

Edinburgh Veterinary Review, and Annals of Comparative Pathology. No. 1. July, 1858.

An Essay on the Pathology and Therapeutics of Scarlet Fever. By Caspar Morris, M.D., &c. Philadelphia, Lindsay & Blakiston, 1858, 8vo, pp. 192, \$1.25.

A Text-Book of Vegetable and Animal Physiology, designed for the use of Schools, Seminaries, and Colleges in the United States. By Henry Goadby, M.D., &c., &c. Embellished with upwards of 450 illustrations. New York, D. Appleton & Co. 8vo, pp. 313, \$2.00.

Braithwaite Retrospect of Practical Medicine and Surgery. Part 37. New York, William A. Townsend, July, 1858.

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ESSAYS, MONOGRAPHS, AND CASES.

A Case of enormous diffused Traumatic Aneurism of the Axilla, from Sub-cutaneous Rupture of the Artery;—Ligature of the Sub-clavian—Repeated Secondary Hæmorrhages from the Wound till the forty-first day after the Operation—Subsequent Suppuration of the Aneurismal Tumor, and Hæmorrhage from it—Recovery, &c. By REED B. BONTECOU, M.D., of Troy.

Thos. R. Curran, a feeble man, aged fifty-seven years, badly crippled by rheumatism, came to my office on the morning of October 30th, 1857, with dislocation of the right humerus into the axilla; the accident occurred about ten minutes previously, by falling with outstretched arm on the pavement; the deltoid and axillary regions were so much swollen that I could not detect any cavity under the acromion, nor could I feel distinctly the head of the bone in the axilla. I satisfied myself, however, that there was dislocation, and immediately set about reducing it. The patient was pale, sweating profusely, and faint from pain and internal hæmorrhage. Reduction was easily effected, with very slight extension of the limb, while I held my uncovered heel in the arm-pit. The pain was immediately relieved, but the arm remained as it was when he came in, *perfectly palsied*. The swelling rapidly increased down the arm under the fascia, under the

deltoid and pectoral muscle, and also downwards under the latissimus dorsi. The pulsation continued in the radial, but I could not control either it or the swelling, by pressure over the sub-clavian. I sent him home, and in a short time saw him, in company with his physician, Dr. Thomas C. Brinsmade. The aneurism was truly enormous; the arm greatly distended from the elbow to the neck, and the shoulder and scapula carried from the chest by a large effusion extending to below its lower angle.

I desired to cut through the anterior wall of the arm-pit, and ligature the vessel at its injured part, but as the sub-clavian could not be controlled, and the effusion had seemed to have reached its limits, it was deemed advisable not then to interfere. Absolute rest was enjoined, and cold lotions ordered to the affected parts. During the five succeeding days, the blood became gradually diffused throughout the right limb and whole of the right side, with infiltration of the neck, so as to obscure completely the sub-clavian. Circulation of the arm was good; temperature natural; arm edematous, and completely paralyzed. The patient was from the first effected with phantomic delirium, and required constant watching, and at times two or three assistants, to prevent him from rising and doing himself injury. On the night of the fifth day after the accident, I was sent for in haste, and found that the patient, in a sudden effort to escape from imaginary robbers, had brought on a fresh bleeding, with great pain, like that experienced when the arm was first injured. The size of the tumor was much increased in the direction of the latissimus dorsi, down to the floating ribs. The patient seemed greatly prostrated, and must have bled largely. I think the tumor at this time contained more than a half gallon of blood. Laudanum, in tea-spoonful doses, was ordered to be given every six hours, together with brandy occasionally, and beef tea as nourishment. I felt that some operative procedure was imperatively called for at that time to save the patient, and a further consultation was had on the sixth, the day following. Drs. A. Watkyns and Lewis meeting us, it was advised to wait. No further noticeable hæmorrhage occurred, and the patient seemed gaining strength, until the fifteenth, when a perceptible increase was noticed in the size of the tumor, and the most prominent part presented appearances of inflammation. On the following day, a further increase in the tumor was detected, and for the first time the aneurismal bruit was heard at the lower part of the anterior wall of the axilla; on the day following, the whizzing was absent; on the twentieth inst., another consultation was held, the gentlemen mentioned above meeting us, which resulted in a de-

cision to tie the sub-clavian. The infiltration of the neck had in a great measure subsided, and the artery could be felt; two o'clock the following day was fixed upon for the operation. The intention was to ligature the artery above the clavicle, if possible, and in case of failure there, to search for it below; the elevation of the clavicle rendering it doubtful if it could be reached above

Nov. 21st, 2½ P. M. The patient cheerfully laid himself on the table prepared for the purpose, on his back, with shoulders slightly elevated, and with the assistance of Dr. Thomas C. Brinsmade, who continued throughout in attendance on the case with me, and Drs. A. Watkyns, Wheeler, Whiton, Lewis and Seymour, I proceeded to the operation. The patient was put under the influence of chloroform; we attempted to depress the clavicle, but could not. The neck was opened by an incision parallel to, and near the superior border of the clavicle, extending from the sterno-cleido mastoid to the trapezius, and by one perpendicular to it near the posterior border of the mastoid. The superficial jugular was carried to the acromial side of the wound, and the artery fairly exposed after a somewhat embarrassing dissection, considerable difficulty being experienced in passing a ligature under the artery, owing to the depth of the wound, its concealment by the clavicle, and the improper curvature of the needles, a small sharp curve like that of a button-hook being required. A single waxed silk ligature was carried beneath the artery, just at the acromial border of the scalenus anticus muscle. All present satisfied themselves that only the artery was embraced in the ligature. In withdrawing the needle a smart hæmorrhage of venous blood sprang from an acromial vein, which crossed the bottom of the wound, and which was put upon the stretch by the long curve of the needle. I immediately tightened the ligature with my fingers, and the hæmorrhage ceased as the flap was replaced; pulsation in the radial also stopped, and the aneurismal tumor softened and diminished in size. An arterial branch leading to the platysma, momentarily obscured the parts as that muscle was divided. The operation unavoidably occupied about an hour, during which time the patient was under the influence of chloroform, insensible to pain, but rationally conversing with those about him. Wound was dressed with sutures, straps and lint, and the patient made comfortable in bed, the circulation good, and the right arm maintaining its temperature.

The patient was kept on beef tea and good nourishment, with occasionally brandy; laudanum 1 drachm at night; the pulse came down to 60 on the second day after the operation, and a very little

soreness of the wound was all the annoyance he complained of, except the confinement to the recumbent position which was strictly enjoined. The edema of the arm subsided to a considerable extent, and the aneurism became more circumscribed, the contents remaining fluid, but no thrill or pulsation could be detected; pulse, 60; he continued improving, and on the 27th, one week from the operation, the wound had healed, except where the ligature passed out, and from which a small discharge of pus was escaping. Huxham's tincture, with the addition of quinine, was prescribed; the ligature was detached on the 9th day, and the knot found so small as only to admit a fine needle. No untoward symptoms occurred until Dec. 3d, when I found the patient quite weak and exhausted from ineffectual efforts to evacuate his bowels, occasioned, it appeared, by the unusual contraction of the sphincter muscle from fissures and hæmorrhoidal tumors. The straining had caused considerable soreness of the right side of the neck and shoulder, and for the first time distinct and regular pulsations were observed in the right radial since the artery was ligatured. The aneurismal tumor was more tense and there was some soreness about the wound, to which wet cloths were applied. A laxative of *nux vom.* and aloes was ordered every night; injections were ordered also. On the evening of the 5th he sent for me, as he was suffering very much from ineffectual attempts to void his fæces. I found him sitting on the night stool quite exhausted, and had him at once put to bed on his side, and found on examination a most unyielding contraction of the sphincter still existing, and almost entire paralysis of all the other muscles about the rectum. With a lithotomy scoop and an injection his bowels were unloaded. I regretted very much this circumstance, as the unavoidable efforts made by the patient seemed likely to increase the risk of rupture of the artery or aneurism. Two flabbysprouts from the wound were all that remained unhealed, and from these a few drops of pus kept the dressing moist; a chill also occurred on that evening, but he was bright and cheerful on the day following, and did well until 5 o'clock on the morning of the 7th inst., when he bled from the wound. His daughter controlled the hæmorrhage by a compress until my arrival, when I removed the dressings and found that he had bled only a few table-spoonsful; pulsation in the stump of the sub-clavian and all the great arteries of the neck strong; no infiltration of the neck; a compress with dry lint was applied, and bandages so arranged as to make pressure on the wound; he had made no exertion during the night, and the only circumstance to which it could be attributed was taking an ounce of gin an hour previously. All stimulants were ordered discontinued, and fifteen minims

of tinct. digitalis to be given every two or three hours, until the excitement of the arterial system was subdued. At 10 o'clock he bled again, this time quite profusely; the attendant said the stream came with a noise. Compression had controlled it before I got there. I dressed the wound again, and re-applied the compress more firmly. The patient was pale, and sweating profusely, but composed. 7 P. M., again sent for in haste, bleeding having recurred, but was soon controlled by Mr. Moore, one of my pupils, who had remained with the patient during the day. I removed the dressing, and with Anel's syringe injected into the wound a drachm of perchloride of iron; a slight smarting was complained of by the patient, and the wound dressed as usual. 11 P. M., bleeding again occurred, and I removed the dressings, crowded lint wet in perchloride of iron into the wound, and dressed with straps and compress as before. Dec. 8, 6 A. M., the patient bled again from the wound, and lost perhaps 2 oz. it; was easily controlled by pressure at the right point, and clean dry dressing re-applied. In the afternoon he complained so much of the restraint imposed upon him, that he was allowed to sit up fifteen minutes in bed. Slight bleeding at this time took place, but was controlled as usual. I adjusted a tourniquet, so that firm pressure could be made at any moment. The patient complaining of headache, his digitalis was ordered to be given only once in 8 hours; pulse 64.

9th, 6 A. M., I was called in haste to the patient, whom I found had been bleeding again, but to a small amount; it was easily controlled; he had slept well; felt refreshed, and headache gone. 9 A. M., I dressed the wound, which I found converted into two ulcers, each three-fourths of an inch in diameter; dressed the wound lightly and left off the compress; patient feeling well and hungry, with pulse at 52; he continued cheerful and did well until the evening of the 14th instant, at 10 o'clock, when bleeding again took place from the wound. Being myself absent from the city, Dr. Brinsmade attended to him, and I found him comfortable, on my return, 2½ the following morning. 8 A. M., hæmorrhage to the amount of 2 ounces again occurred, and was arrested by pressure as on previous occasions. At 2½ P. M., another bleeding took place, when I removed the dressing and again injected perchloride of iron, 1 drachm. 6 P. M., the patient had another bleeding, accompanied by severe pain in the wound, of a tearing sensation; dressings removed, and clean ones applied; and at 8½ a repetition of the same, when 2 ounces were lost, and again at 11 P. M., a small hæmorrhage of dark blood.

Dec. 16th, at 3 A. M. A bleeding of 3 ounces occurred, and

was arrested by pressure; great tenderness about the wound was complained of, and swelling and redness from the wound to the middle of the neck. 6 A. M., hæmorrhage again occurred, and was arrested by pressure applied for a few moments; a blush of erythematous inflammation was noticed all over the neck; at 2 P. M., the inflammation had extended to the opposite side of the neck, and down over the pectoral muscle to the axilla; at 11 P. M., the inflammation had further extended in all directions, and had the appearance of erysipelas; pulse was 75; wet cloths were kept applied to all of the inflamed surface, and to the left eye, of which he complained much. I found on the following day that the ulcers, at the site of the original wound, were converted into one large ulcer, with ragged edges and angry appearance. The inflammation of the neck rapidly subsided, and the ulcer improved with the wet dressings, which were agreeable to the patient and were continued; the patient was kept under the influence of digitalis. Tint. ferri. chloridi was added to his medicines, to be taken three or four times a day; the wound was occasionally dusted with tannin, or touched with sulph. copper, and was contracting under these applications.

Everything went on well until the 20th, at 6½ P. M., when I was summoned to the patient in haste, and found him bleeding profusely; his daughter, a young woman of unusual intelligence and firmness, was unable this time to arrest it. I instantly removed the dressing and injected 1½ drachms of perchloride of iron, and crowded in dossils of lint wet in the same. Compression by bandage was again resorted to, and the digitalis resumed in five-drop doses, it having been discontinued the day previous, his pulse being at that time only forty-eight per minute. I left him cheerful, and was summoned to him again at six the following morning, when I found he had bled some eight or twelve ounces; the irritation of the wound from injections and pressure was so great that pressure only for a moment could be borne; wet dressings were ordered, and seemed grateful to the patient, who continued improving in every respect till the 25th instant, about eight A. M., when he bled some ten or twelve ounces. It occurred during sleep, and might have proved fatal had not his attendant fortunately discovered it. The patient was greatly annoyed at this accident; wound was dressed with dry lint and straps; citrate of iron was ordered in place of the muriated tincture. The patient rallied and continued gaining strength, and improving in every respect till the morning of January 1, 1858, when he bled for the twentieth time from the wound in the neck; it had flowed rapidly, and eight or ten ounces

were lost. On my arrival I immediately removed the dressing, and injected into the bottom of the wound two drs. of Pagliari styptic, for the preparation of which I would refer those interested to the British and Foreign Medico-Chirurgical Review, October, 1852, page 555. I used this at the suggestion of Prof. W. P. Seymour, who had seen the patient with me. The wound was dressed with straps and dry lint, and a compress sunk well behind the clavicle, where it was retained until the 6th instant, when I was obliged to discontinue it on account of a threatening abscess below the clavicle. The arm had been very much swollen since the use of the hard compress, which seemed to interfere with the returning blood in the sub-clavian vein. On the 13th the digitalis was wholly discontinued, and ale and liberal diet allowed. On the 15th the general condition of the patient had greatly improved, the wound in the neck had contracted to the size of a dime, and was healing. Continued to dress it with lint and straps, and occasionally stimulating it. Slight redness and tumefaction of the integuments covering the aneurismal tumor was discovered at this time, accompanied with tenderness and an appearance of suppuration. I might add that the aneurismal tumor had become quite small, and seemingly disconnected from the axilla. It was situated about midway between the crest of the illium and the arm-pit, and under the edge of the latissimus dorsi. On the evening of that day the patient was attacked with a harassing cough, without expectoration and pain, referable to the tumor, which looked quite red and painful. Laudanum was administered for the cough, in teaspoonful doses, and wet dressing applied to the side. The tumor continued enlarging, reaching from the axilla to the ilium, and much inflamed; and on the 19th, fluctuation being distinct, I explored it with a fine trocar, and found pus. The opening was then enlarged and the contents evacuated, consisting of pus, mingled with fragments of old clots of blood. Six ounces were taken at this time, and a poultice ordered applied. The opening was purposely left valvular, (fearing hæmorrhage from the axilla,) and did not discharge spontaneously, but was evacuated twice a day by a grooved staff. The abscess increased in size considerably, and on the 29th I opened it freely at a more dependent point, from which it discharged without assistance.

On the evening of the 30th, a hæmorrhage from the abscess occurred through the old opening, to the amount of four ounces. A large sponge was substituted for the poultice, by which an equable pressure was maintained over its entire surface. No further bleeding occurred; the abscess rapidly contracted; the discharge diminished;

wound in the neck healed, and the patient very much improved in health; seemed in a fair way to recover, when on Feb. 7th his condition suddenly changed, exhibiting great feebleness and a jaded look; the wound of the neck reopened and discharged pus; the abscess of the side enlarged to a fearful extent, its walls crumbling on every side, and discharging an increased quantity of fetid matter, with fragments of sloughing tissue and clots. The abscess had burrowed downwards so as to necessitate an opening in a more dependent part. Great lameness of the right side and shoulder was complained of for three or four days; arm swollen and edematous; circulation fair; pulse 85; patient pale and weak; brandy in addition to his ale was allowed, and the doses of quinine and Huxham's tincture increased, and ordered every six hours. Feb. 8th, patient appeared rallying somewhat; the abscess was painful and not discharging well from the openings. I introduced a piece of elastic catheter, perforated on all sides, over this the large sponge, covered with oil silk, as a substitute and improvement on the poultices; pulse 80; general condition improved.

Feb. 9th. The sinus in the neck, apparently an inch and a half in depth, and large enough to admit a pea, was still discharging some pus; dressed it with sponge tent, and the whole neck covered with wet cloths, as there was some fullness above the clavicle, accompanied with a flush of redness and heavy pulsation of the great vessels; the sinus in the neck healed, and a gradual improvement in the general condition of the patient was not interrupted by anything worthy of remark until the 18th inst., when another opening became necessary in the abscess of the side, it having burrowed near to the ilium.

March 1st. Found the old abscess still discharging, but to a trifling amount, comparatively, and its dimensions much contracted. At this time a new abscess was detected in the arm, lying along the course of the brachial artery from the lower third to the axilla, suppuration of the remaining clots in these situations evidently taking place, and discharging itself into the abscess of the axilla and side when the patient assumed the recumbent attitude. I applied a roller carefully to the whole arm, which continued swollen and edematous when allowed to hang by the side.

April 3d. Swelling and inflammation of the axilla, which had been for some days manifesting itself, resulted in an abscess, pointing in the apex of the axillary space. I opened it near the posterior fold, and it discharged pus and clots of blood freely; the old abscess discharged very little after this, and the patient continued to improve in every respect until the 9th inst., when, after some inflammation about

the neck wound, it reopened, and continued discharging a small quantity of pus daily. On the 15th inst., under the care of Dr. Seymour, the patient suffered a hæmorrhage from the wound of florid blood to the extent of some ounces. Pagliari's styptic was used as before, about two drachms being injected, and no further hæmorrhage occurred; the patient's health seemed unaffected by this last accident, and he continued steadily to gain flesh and strength. The next note of the case, April 8th, reports the general condition of the patient good and improving, the abscess in the arm pit being the only one discharging. Sloughing of the loose tissue in this situation had occurred, and masses of considerable size were assisted away occasionally with the forceps.

April 10th. The evidences of suppuration along the course of the brachial artery, which had existed for some time, now threatened to make an opening near the elbow joint; this was opened by Dr. Brinsmade, (who was in attendance on the case during my illness,) and, after discharging freely for a few days, closed; soon after this the opening in the axilla healed, and on the 20th of April the extensive surface so long undermined by abscesses seemed quite sound, and has since so remained.

The paralysis of the right arm had remained complete for four months from the date of the accident, both as regards sensation and motive power; and the first indication of returning sensibility manifested itself in the integuments covering the deltoid, and slowly crept down to the elbow, where it seemed arrested for some time; but during the months of June, July and August, the usefulness of the hand and fore-arm was almost perfectly regained.

I have no doubt that the brachial plexus of nerves was torn across at the same time that the axillary artery was lacerated by the dislocation of the humerus.

The arrest of hæmorrhage in this case was, I think, owing more to well-directed pressure than to any other means used. During the first fifteen days after bleeding from the wound occurred, its condition was such that an adequate amount of pressure inflamed the parts, enlarged the ulceration, and was insupportable. After the 20th inst. the wound had so far healed, that I was able to place a small, hard, cylindrical compress of linen posterior to it, and parallel to the clavicle, lying obliquely across the sub-clavian, at the point ligatured. A compress of linen two inches square, and half an inch in thickness, was laid on this, not allowing it to come so far forward as to touch the clavicle; surmounting this was placed a crescent-formed piece of steel, with its convexity resting downwards on the compress, and over this

an elastic suspender, secured to a girth about the chest. Thus I was able to concentrate a sufficient degree of pressure down behind the clavicle, without touching that bone, which was thinly covered by integument, and constantly inflamed. The greatest watchfulness could not, however, prevent slight displacement of the compressing bandage, and hence the hæmorrhages which followed.

The interesting features of the foregoing case may be summed up as follows :

The novel manner in which the aneurism was produced. Its large dimensions elevating the clavicle, and rendering the operation difficult. First distinct pulsation in radial detected twelve days after the operation. Separation of the ligature on the ninth day after the operation. Secondary hæmorrhage sixteen days after the operation, and nine days after the separation of ligature. The repeated recurrence of hæmorrhage during twenty-six days. Extensive inflammation of the neck from pressure. The inefficacy of perchloride of iron as a styptic. The suppuration of the sack and hæmorrhage from it. The almost complete loss of sensibility and motive power in the arm, and the extensive suppuration of the arm, axilla, and pectoral region.

*Milk—The estimation of its Commercial Value and Adulterations.**

With the aid of the valuable monographs, whose names are given below, we do not propose to write an article which shall be solely designed for those who cultivate chemistry as amateurs, but to present what, in our view, may answer as the best and surest mode of determining the value of the milk which the dealer furnishes our families, morning after morning. If a system for determining the *value* of milk is to be useful in a community, it must be so simple, that any man of ordinary acquirements and moderate carefulness can employ it. The head of the family

**Instruction pour l'essai et l'analyse du Lait, par M. Bouchardat, et feu T. A. Quevenne. (Extrait du Répertoire de Pharmacie, Juillet et Aout, 1856.)*

Notice sur le Lait, les falsifications qu'on lui fait subir; instructions sur les moyens à employer pour les reconnaître; par MM. A. Chevallier et O. Reveil. Paris, chez M. Salleron, 1856.

Instructions pour l'usage du Galactomètre centésimal et du Lactomètre, instruments propres à faire reconnaître la pureté du lait des vaches; par H. Dinocourt. Paris. Imprimerie d'Alexander Bailly, 1856.

Adulterations detected in Food and Medicine. By Arthur Hill Hassall, London: Longmans, Brown, Green, Longmans & Roberts, 1857.

is, in most cases, not able to call in the aid of a chemist for the examination of milk, and it is much to be desired that he should be able at a small expense to obtain such apparatus as may give him the means of examining the article for himself. A quantitative chemical analysis is undoubtedly the surest mode of getting the absolute value of milk, but this is not available for ordinary use; and besides, it requires an amount of time which would make it useless for practical purposes. Hence we are obliged to resort to the use of instruments for quick determination which may give us very close, approximate results.

The quality of milk for family use does not depend alone upon the amount of cream it contains, nor upon the casein, but upon these along with the relative amount of water and sugar. We shall devote ourselves, then, to the methods for determining the amount of water, casein, sugar, and fatty matter in milk.

Water.—The quantity present determines to a great extent the specific gravity of the milk. Ordinarily this is 1030, but it may range between 1026 and 1031, without any fraudulent addition of water to the milk. The specific gravity may be determined in several ways. The most troublesome of all these is probably the employment of the Sp. Gr. bottle—and the most convenient the use of some form of the hydrometer. One of the latter has been prepared with the view of determining at a glance the amount of water present. The instrument is made so as to sink nearly its full length in pure distilled water, and is marked at this point 0°. The scale is divided into 25 degrees, counting downwards, 20° being the point to which the instrument would sink in pure Orange Co. milk; 15° indicates three-quarters milk and one quarter water; 10° half milk and half water; and 5° one quarter milk and three quarters water. This instrument could only give comparatively correct information when the milk was *unskimmed*, as skim-milk really gives a higher specific gravity than that which has not been deprived of its cream. Hassall says, “if the cream be either in part or wholly removed from milk, the residual milk will weigh heavier than that which contains its normal proportion of cream. Skim-milk tried by the scale adapted for pure milk would give a higher specific gravity than ordinarily belongs to pure milk, and hence the error might be committed of supposing it to be pure. * * * Again, if to such skim-milk we add a certain per centage of water, we restore it to its proper specific gravity, and therefore this milk would show * * * the density proper to pure milk, and hence this fraud would escape detection.” This fact shows us that we dare not rely alone on the specific gravity. In such a case we are necessitated to employ an instrument to deter-

mine whether the cream has been removed or not, so as to aid us in our estimate of the value commercially of the milk. Before, however, describing the principle of the lactometer or creamometer, let us direct the attention of our readers to an excellent form of *hydrometer* for determining the specific gravity of milk, whether creamed or not; we refer to that called the centesimal galactometer of Mons. Dinocourt, manufacturer of physical apparatus, 9 Quai St. Michel, Paris.

Like ordinary hydrometers, the centesimal galactometer consists of a tube containing the scales, a cylinder serving to float it, and an olive-shaped bulb, filled with shot or mercury, to act as ballast in keeping the floating instrument in a vertical position. Of these three parts it is only necessary to describe the scales. (Fig. 1.) First, then, the scale marked A, which answers for the determination of milk that has not been deprived of its cream. "The first degree above is marked 50, and those below it from 50 to 100 and over. Each degree starting from 100 in mounting up to 50, *represents a hundredth of pure milk*. To comprehend well the value of the degrees of this scale, it is sufficient to give an example: supposing, then, that the galactometer is sunk to the 85th degree, that will indicate eighty-five hundredths of pure milk, and consequently that fifteen hundredths of water had been added to this milk; if the galactometer is stopped at 60 degrees, there will be forty hundredths of water or four-tenths of water added. We see that, by adding to the number of

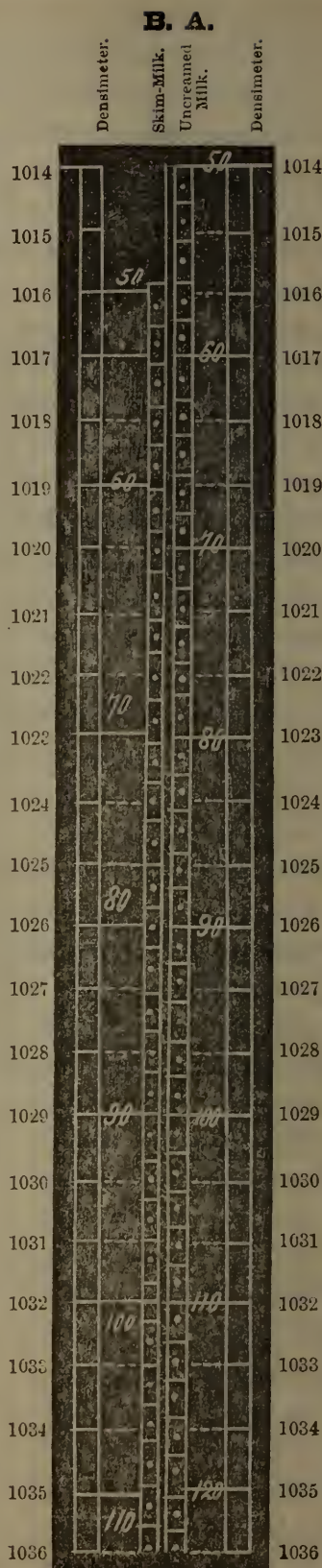


Fig. 1.—THE SCALES OF DINOCOURT'S CENTESIMAL GALACTOMETER AS COMPARED WITH THE DENSIMETER OF MONS. COLLARDEAU.

hundredths indicated by the instrument a complementary number to form one hundred, this complementary number will give in hundredths the quantity of water added to the milk under trial. * * * The space comprised between 100 and 120 comprehends the different densities of pure milk—that is to say, *without the extraction of cream, as well as without the addition of water*; and the scale has been prolonged so as to serve every possible case.”

The scale B, is constructed for weighing skim-milk, and the same principle precisely has been employed in its construction. Every degree from 100 up to 50 represents a hundredth of pure skim-milk, and the estimation of the amount of water added is precisely the same as with milk that has not been creamed.

These scales give the value of milk only in hundredths, “nevertheless it will always be easy to compare these degrees with the density or *specific gravity of the milk*. It is known that by the word *density*, in physics, is meant the specific weight of any liquid whatever, water being taken as a 1000, a litre of distilled water weighing 1000 grammes or 1 kilogramme at the temperature of 4° C. If we wish to know the density of the milk under test, we will recollect that 50 degrees of scale A, of the galactometer, corresponds exactly with 1014 of Collardeau’s densimeter, (at 15° C.,) and that every tenth of the scale of the galactometer is equivalent to 3 degrees of the densimeter, and consequently three hundredths and a third are equal to a degree of that instrument. Thus 1014 corresponds to 50; 1017 to 60; 1020 to 70, &c.”

Two things are necessary to make the determinations of Dinocourt’s galactometer valuable, viz., a knowledge as to the character of the specimen, whether it has been deprived of its cream, and its temperature at the time of the test.

The character of the specimen is determined by the use of the lactometer, an instrument consisting of a long tube divided into 100 parts, from above downwards, intended to indicate the per centage of cream present. The milk is well stirred, so as to produce perfect admixture of the milk with the cream, and then poured in the tube until the zero point is gained. It is then placed in a cool place twenty-four hours, when the per centage of cream can be readily recognized by the difference of color in the contents of the tube.

The scales of the galactometer are constructed for the temperature of 15° C., (about 59° F.,) and if the milk is at that temperature the indications of the galactometer will need no corrections; but if it be above or below that, the *apparent* degrees will need corrections, which

are easily made by the aid of tables that accompany Dinocourt's instructions for the use of his instruments.

So far, then, as these instruments go, they furnish very valuable determinations. But it will be observed that they only indicate the amount of cream and water present in milk, giving us no information as to the quantity of sugar and casein that may be present, which principles certainly are of great importance in a hygienic point of view. And without dwelling upon other instruments and methods of examination, such as Donne's lactoscope, Quevenne's lacto-densimeter, Vernois and Becquerel's hydro-lactometer, we will direct attention to the simple contrivances which Chevallier and Reveil propose for the determination of the presence of the four important constituents—*water, casein, sugar, and fatty matter.*

The apparatus necessary for a commercial analysis of milk is all neatly arranged in a portable case, to be had of Salleron, No. 1 Rue de Pont de Lodi, Paris; and consists of reagents, burette, &c. It may be considered as composed of two parts, one comprising everything necessary for the determination of the sugar, and the other for the estimation of the other principles.

The quantity of sugar should *first* be determined, and the process is as follows: The milk having been well shaken so as to form a homogenous mass, is then poured (about 80 grammes) into a porcelain capsule, and heated to ebullition over a spirit lamp. To the boiling milk is added three or four drops of sulphuric acid, to be thoroughly mixed with it by means of a glass stirring rod. As soon as coagulation has been effected, it is thrown upon a filter and the whey received in a beaker-glass. If the liquid comes through turbid, it is to be thrown again on the filter. The clear whey is to be cooled down to about 15° C, by plunging the vessel in cool water. During the cooling 20 cubic centimetres of a solution of *potassio-sulphate of copper* (the liquor of Fehling*) is then poured into a glass balloon along

* The solution of potassio-sulphate of copper, recommended by Chevallier, differs somewhat from that of Fehling, and is made according to the following formula:

Pure crystallized sulphate of copper...	40 grammes.
Distilled water.....	160 "
Caustic soda	150 "
Caustic potassa.....	100 "
Distilled water.....	500 "
Neutral tartrate of potassa....	160 "

To prepare the liquid, the sulphate of copper is to be dissolved in the smallest

with a like quantity of water. This liquid is heated to boiling, over a spirit lamp. Of the cooled whey 20 cubic centimetres are taken and mixed also with 20 cubic centimetres of water, and of *this mixture* 20 cubic centimetres are taken with the burette and poured drop by drop into the boiling potassio-sulphate of copper mixture, the process being carried on carefully until the liquid acquires a beautiful brick-red tint, without the presence of any blue or violet discoloration. Having accomplished this, we shall find that the supernatant liquid becomes colorless or of a slight yellowish tinge, the red precipitate quickly subsiding. "We can now read on the burette what was the quantity of the whey employed for the destruction of 20 cubic centimetres of the blue liquid, and *each division of the burette corresponds to one gramme of lactine in the litre.*" Thus, if the mark of the liquid in the burette is 55, the specimen of whey operated upon would contain 55 grammes of sugar in 1000 grammes of milk. It is rare that the sugar of milk is present in greater proportion than 58 parts in 1000 of whey, or less than 50. Chevallier and Reveil consider "*every specimen of milk whose whey gives less than 53 thousandths of sugar as adulterated.*"

This process for the estimation of the sugar can be employed on milk itself, but as the sources of error are greater, "*it is necessary to consider that every specimen of milk which gives less than 49 thousandths of sugar is adulterated with water.*"

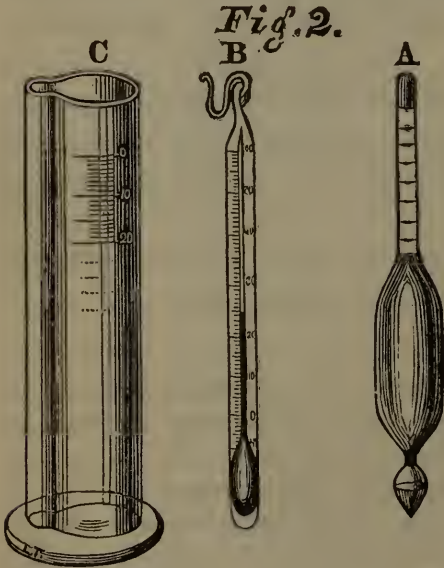
The following Table shows the amount of water added to milk, as indicated by the quantity of sugar present in thousandths:

quantity of water possible, (160 grammes,) the tartrate of potassa is then to be dissolved in water and mixed with the other solution, and finally the solution of soda and potassa is to be added. Sufficient distilled water is then to be added, so as to make the quantity of the liquid 1155 cubic centimetres at 15° C.

The copper contained in 20 cubic centimetres of this liquid should be reduced by 0.134 of lactine. It is necessary whenever this liquid is prepared to test it by experiment, as at times the exact titriton can only be accomplished by the addition of water or sulphate of copper.—*Jour. de Chim. Med.*, ii., 301.

WATER.	MILK.	SUGAR.	WATER.	MILK.	SUGAR.
100	—	—	45	55	30.8
95	5	2.8	40	60	33.6
90	10	5.6	35	65	36.4
85	15	8.4	30	70	39.2
80	20	11.2	25	75	42.0
75	25	14.0	20	80	44.8
70	30	16.8	15	85	47.6
65	35	19.6	10	90	50.4
60	40	22.4	5	95	53.2
55	45	25.2	—	100	56.0
50	50	28.0			

The density of the milk and the amount of the cream is then determined by the employment of three instruments, the galactometer



(A), thermometer (B), and creamometer (C); (Fig. 2.) The first is a densimeter, with a double scale, adapted both for pure milk and skim milk, the divisions being precisely the same as those employed in Dinocourt's instrument. The second is an instrument containing alcohol, colored red, and is intended to be placed in the groove of the creamometer. The latter is a test glass, with groove at side for thermometer, whose capacity has been divided into 100 parts, although but 20 divisions are marked, as milk will never contain a

larger quantity of cream than this. These three instruments are made very neatly, so as to occupy but small place, and in beauty and convenience are far superior to Dinocourt's. The determinations of the galactometer require corrections, in case the thermometer should show a temperature above or below that of 15° C, for which purpose Chevallier and Reveil, in their instructions, present a set of admirable tables.

By way of resumé, we may transfer the following from the authors of this method of examination:

“The pureness of milk may be easily recognized by a union of three methods:

1st. Determination of the quantity of sugar it contains.

2nd. Its *real* density; that is to say, the density after the correction of the influence that a more or less elevated temperature could exercise on this density.

3d. The determination of the proportion of cream.”

Every specimen of milk should be considered as adulterated, whenever:

1st. Its whey contains less than 53 thousandths of sugar, or when the milk itself furnishes less than 40 thousandths.

2nd. When the milk, whether creamed or not, furnishes with the galactometer a *real* degree less than 100.

3d. When the milk furnishes less than 8 per cent. by the creamometer.

The plan of operations proposed by Chevallier is so simple that it can be readily mastered by any one, either with or without a knowledge of the practical details of chemistry. And since it is unlikely that our cities will create inspectors of milk, with sufficient chemical knowledge to give a thorough analysis of the article, it is proper that the method of making a close approximate analysis should be rendered so simple that any one could apply it.

We have said nothing about the supposed additions of chalk—a very rare adulteration—sugar, starch, &c. These are but infrequently employed in this country. We have most to complain of being furnished with skim milk instead of pure milk, or milk that has been largely watered instead of that which the milkman has obtained directly from the cow. If we can obtain milk from cows that have been fed on nutritious food, without admixture with the fluid that the pump—the cow with the iron tail—supplies, we need have very little fear of the presence of such impurities as the timid may imagine have been added by the milkman.

L. H. S.

Accidents resulting from Arsenic to the Workmen in the Hartz Mines.

By DR. BROCHMANN.

The kind of work which brings the laborers in the mines of the upper Hartz in contact with arsenic, occurs at the silver foundry of Saint André, and consists in the roasting of the arseniferous ores, the sublimation and collection of this metal, or rather of its oxide, which, after a second sublimation is packed up in casks. These operations,

although simple, expose the workmen to the action of the vapors and the dust of arsenic, in the condition of the sulphide or oxides, and this is done with the greatest ease, since three times a week twenty-four hours are devoted to the work. Whatever may be the cause, we have not observed, in the men devoted to these occupations, derangements of health as serious and as frequent as we would have supposed, which makes it necessary to attribute it to the different prophylactic means which are used by them. Of the latter may be considered the custom of working with a sponge placed before the mouth, and of putting on thick clothing so as to prevent the metal from coming in contact with the skin.

As regards the *diseases* engendered by arsenic, Brochmann observes that accute poisoning is very rare. The cases reported in the mines are exceptional. Nor does he find examples of chronic poisoning more numerous, unless we wish to give this name to moderately severe diarrhœas, and to a peculiar tendency to the saturnine influence, although this fact, even, is not demonstrated.

The most common effects of the arsenic consists in an irritant action on the schneiderian membrane, occasioning sneezing, epistaxis, stoppages of the nasal fossæ, or on the mucous membrane of posterior fauces, from which anginose affections result. But the most frequent and troublesome lesions displayed themselves on the skin. In the first stage there is a swelling of the face; at an advanced stage erythema (paratrimma) appears, which is most usually observed in the inguinal region, then in the axilla, and about the articulations of elbow and knee. This eruption degenerates rapidly into ulceration. The most frequent, obstinate and troublesome consequence is a papular exanthem, which appears either on the face, in the axilla, on the hips, or in the articulations of the knee or elbow, occasioning violent itching, and continuing sometimes for a year, even after the workman has ceased from this work. Whatever it may be, the eruption never gives rise to any marked derangement, and never degenerates into a more serious affection. Under any form, the arsenical intoxication produces always fewer grave disorders than the saturnine. Experience has shown that it has not shortened the existence of the laborers. Prognosis is hence much less serious. Nevertheless it is proper to watch carefully lest these affections, always simple when the habitual precautions are employed, should be aggravated by negligence.

The treatment of the slight forms of arsenical intoxication just described do not demand any very serious attention. The irritation of the mucous membrane and the skin yield promptly, as an ordinary

thing, to emollient and cooling topical applications, if it is not supplied with continual food for its preservation through the renewal of the cause. When the affection is inveterate, and due to long continued action of the arsenic, it is proper to conjoin with the local applications the general treatment for arsenical poisoning. Hydrated oxide of iron is recommended, although Dr. Blum, physician at the mines, advises long continued use of magnesia

In order to protect the workman from the arsenical emanations and powder, it is recommended that a sponge be worn before the mouth, that fatty food be employed, and great care as to cleanliness, and with a view of being prepared for acute poisoning, a bountiful provision of the hydrated sesquioxide of iron is kept on hand.

It is well to append to this article of Brochmann's, M. Imbert Gourbeyre's general table of diseases of the skin produced by arsenic.

1st. *Petechial eruptions*, or *ecchymoses*, noticed by Schulze, Léod, Hahneman, and Christison; they seem to effect the trunk and genitals. 2nd. *Papulous eruptions*, which attack, by preference, the elbow and face. 3d. *Urticaria*, (Fowler, Hahneman, Orfila,) very frequent. 4th. *Vesicular eruptions*, (Boerhaave, Barrier, Guilbert, Hahneman, &c.) 5th. *Erysipelatous eruptions*, (Desgranges, Schulze, Spengler.), 6th. *Pustular eruptions*, (Christison, Orfila, etc.); these have been compared to variola; they terminate in crusts or ulcerations, and leave cicatrices. 7th. *Ulcerations*, (Guilbert, Hahneman, Schulze, Christison, Orfila,) these have been noticed on the head, the limbs, scrotum, tongue, lips, and throat; they seem to originate in pustules, which readily break, and give rise to ulcerated surfaces. 8th. *Gangrene*, (Bachman, etc.) often noticed about the genitals. L. H. S.

Tepid Injections in the treatment of Non-congenital Phymosis of Infants.

By WILLIAM C. ROGERS, M.D., Green Island, Albany Co., N. Y.

I have been uniformly successful in treating the non-congenital phymosis of infants, depending upon an accumulation of the secretion of the *glandula tysoni* within the prepuce, by tepid injections repeated two or three times a day *pro re nata*.

By cautiously introducing the point of a glass ear syringe, previously oiled, within the orifice of the swollen and infiltrated prepuce, and by making gentle pressure upon the same in such a manner as to steady the instrument, and reduce still further the orifice of escape for the contained and injected fluids, I have in many instances washed out

from about the glans penis a large quantity of milky secretion, in some cases entirely fluid, and in others consisting of numerous crusts or scales floating in thick puruloid mucus. The removal of the cause, the acrid secretion, has been invariably followed by a subsidence of the disease, and in no single instance have I been compelled to use the injections more than three times before the cause was entirely removed.

I find no mention of this form of this affection in any of the standard works, and of course nothing on the subject of its treatment, and therefore lay the above before the profession, who will take it at its worth, and treat it accordingly.

REVIEWS AND BIBLIOGRAPHY.

Researches on Primary Pathology and the Origin and Laws of Epidemics. By M. L. KNAPP, M.D., &c., &c. 2 vols. Published by the author.

These volumes, each of which contains somewhat over three hundred pages, consist of a series of papers in a manner independent of each other, and yet all bearing upon the same subject and tending to illustrate the same idea.

The first volume contains a paper on "the discovery of the cause, nature, cure and prevention of epidemic cholera;" another entitled an "inquiry into the nature of the nursing sore mouth affection;" and an "essay on cholera infantum." The second volume is a "treatise on the scorbutic diathesis."

The mottoes upon the title page of these volumes indicate the aim of the author; one being given thus, in Latin, as from Hippocrates: *Morborum omnium unum et idem modus est, locus autem differentiam facit;* and the other from Rush, commences—"There is but one fever." The author's doctrine, which runs through all of these papers, and is especially developed in the second volume, is, we believe, fairly stated thus, in his own words: "The scorbutic condition is the primary pathological state."

Now, we at once state our opinion, that the evidences for the theory of the unity of disease, or of its one origin, have seemed, whatever has been their source, to be very incomplete, and supported by arguments which are not borne out by logic. Generalization is a very

good thing, and to be commended, but when carried to excess, is as dangerous as its opposite. *Ne quid nimis* ought always to be ringing in the ears of those who attempt to construct theories, or in fact, to lead in any particular direction in the science of medicine. For want of this check, many of the vagaries of medical doctrines have arisen and prevailed, to be succeeded, too often by other and equally erroneous doctrines. Absolute solidism, absolute humoralism, are illustrations of the general error in this respect, while the absolute confidence of some persons in the microscope as a means of diagnosis, and the absolute distrust of it by others, illustrate the same tendency in individuals. In none of these generalizations upon the cause of disease, when that cause is sought as a unit, is logical reasoning adhered to. One or another element is wanting to complete the syllogism. Hahnemann was an ingenious advocate for the unity of the cause of disease, and his "itch" theory is as well supported as any other having a similar aim. But it is not true, as is now freely admitted by his most intelligent followers.

Dr. Knapp's theories are no better supported, manifesting as they do, the same logical deficiencies. It is not a little praise to say that it is no more marked by such deficiencies than those of his predecessors, in what we believe to be the vain attempt to bring all disease to a common origin. The following passage from the second volume of the book under consideration, will enable us to illustrate our meaning within the space at our command. Under the title of illustrations from the chemistry of medicines, we have this anecdote:

"Travelling in the stage (coach) from Louisville to Bardstown, in February, 1856, we met with a Mr. Wright, who resides four miles south of Louisville, having married into the Doup family, noted as horticulturists' and fruit growers for the Louisville market. He stated a remarkable fact, viz., that his child, now an infant, can look upon an unbroken line of living ancestors to the fifth generation. Its parents, grandparents, great-grandparents, and great-great-grandparents, are all living and growing vegetables and fruits for the Louisville market! What a commentary on the benign influence of a vegetable and fruit dietary." (Vol 2, p. 76.)

The syllogistic statement of this is, 1. In the Doup family there are living representatives of five generations. 2. The Doup family grow fruits and vegetables for the Louisville market. 3. Therefore, a vegetable and fruit dietary is promotive of long life. Very clearly, this argument is faulty, and to say the least, has no logical support. Did the Doup family *live* chiefly on fruits and vegetables, for that does not

follow from the fact of their *growing* them. Were there not other causes for their longevity? Is it in fact, certain that they are long lived, for this succession may have been, and it seemed to us probable, that it was chiefly the result of a series of early marriages; for a little calculation will show that this series of generations may exist and the oldest of the individuals not have gone beyond four-score years.

This quotation is not given from its inherent and peculiar weakness, but to enable us to illustrate what we esteem the radical defects of the book, namely, its reasoning is not logical, and that it therefore fails to convince the reader. To go carefully through the volumes and point out the defect wherever it exists, cannot be done within limits proper for these pages.

From these objections it is most agreeable to turn to the consideration of the therapeutic teachings of Dr. K.'s papers. These we believe to be of great value, and especially those which concern the treatment of "nursing sore mouth," and of that compound of diseases called "cholera infantum." Of both these diseases it has been our fortune to see a large number of cases, and we can heartily join with Dr. K. in his denunciations of the methods frequently adopted in their treatment. Of nursing sore mouth, for instance, the argument has not unfrequently been used, that it is an inflammation, a stomatitis, and therefore, to be combatted by antiphlogistics. It is true that patients do live sometimes, when submitted to such treatment; but it is in spite of—not in consequence of it. The disease is one of impaired nutrition, of debility, if you choose the expression; at any rate, of a condition below the level of health, and requires for its cure astringents locally, and tonics, stimulants, good diet, and good air for their general effect. For these reasons, Dr. Knapp declares it to be scorbutic in its character—and so far as this disease is concerned, we incline to agree with his teachings. Confine a pregnant woman to a diet of bread, salt meat, tea, coffee, and only occasional or limited use of fresh meats, succulent fruits and vegetables, and shut her up from the fresh air, and she is clearly in a most favorable state for becoming scorbutic. Yet, it will be found that women are frequently so limited in those regions in which nursing sore mouth prevails. Its very rare occurrence in New York, is doubtless due in a large measure to the varied diet, the abundant supply of fresh meats, fruits and vegetables, and the sufficient exercise, which are easily obtained by all who are in this condition. To continue the use of a varied diet till the time of confinement, and to walk or ride out daily, till the last moment, is the rule with almost, if not quite all of those who pass through their period of confinement and

nursing, with the most complete success; provided, that these be resumed at the earliest possible moment after delivery, and its other immediate perils are passed. While contending with a general tendency among women to this grave difficulty, we have been uniformly most successful when we have resorted to such hygienic treatment.

As there has been some question made concerning Dr. Knapp's cases, and the suggestion ventured upon, that they were not veritable nursing sore mouth, we have quoted in full in our August number one which seems to be typical. We had also the farther purpose of doing justice to his method of treatment by allowing him to state its particulars in his own words. In our own experience, we have repeatedly met with cases in which such articles of diet as those mentioned could not be borne in the mouth without producing very severe pain; and in these cases, astringent mouth washes, of which more or less is swallowed, are necessary. An infusion (the alcohol makes tinctures objectionable,) of cinchona with myrrh added to it, is preferred by us, though we have occasionally used a simple solution of tannic acid. An infusion of red hemlock bark is thought a homely, yet a very good application for this purpose. A large proportion of animal food, and especially, tender and juicy beef, has also seemed to us more beneficial.

In adhering to the usual descriptions of *cholera infantum*, our author fails to see that that name is given to several diseases and ought not to have a place in scientific nomenclature. Still, to follow him, we shall use the words in the same manner that he does. Now the traces of scurvy are, to our mind, very indistinct, if indeed, they exist at all, except in those cases in which a protracted diarrhœa in a mild but persistent form, has debilitated the little patient and rendered him anæmic. Nutrition here, is very seriously interfered with, and we will not say that the condition may not be in some respects like scurvy. But that it is scurvy, *pure et simple*, we see no reason to believe. Dr. Knapp's treatment is, to give the mother, if she is nursing the child, a free, generous, and varied diet, including not only some fruits, but salads, commencing their use very gradually, for too sudden a change to them will be injurious. At the same time, he orders the following mixture:

℞.—Tr. rhei comp.	
Tr. catechu.	
Acaciæ mucil.	
Syrupi simp. aa.,	℥i.
Morphiæ acetatis,	gr. i.
Sodæ Bicarb.	
Ammon. carb. aa.,	℥i.

Of this, the mother is to take a teaspoonful every three hours in a small draught of brandy toddy, and the infant (if about six months,) to take forty drops in a teaspoonful or two of the toddy. The medicine is liked by children, and therefore is readily taken, which is an item of great importance. At the same time he uses this prescription:

R.—Pulv. acid. citric.,	ʒi.
Quiniæ disulph.,	gr. xvi.
Morphiæ sulph.,	gr. ij.
Spt. vin. gall. opt.,	oij.

Of this, the mother is to take a tablespoonful in two or three table-spoonsful of hot water generously sweetened with loaf sugar, at noon, at evening, and at bedtime. The infant is to take about a small teaspoonful of it prepared in the same way, only more dilute, and at the same hours of the day.

We do not learn that the use of drugs is otherwise recommended, and though we have not used either of these prescriptions, we do not doubt that in appropriate cases, they would accomplish all that could be desired. But it is not with children at the breast that the practitioner finds the most difficulty in checking diarrhœas; so long as the mother can be nursed, we rarely find much trouble in treating the disease of the infant; but deprive the latter of the mother's natural supply of food, and then disease may occur, against which, these mixtures would be as powerless as water. Herein, this paper is quite incomplete, and it all arises from the blind obedience to custom in talking and writing about *cholera infantum*, as if it were a veritable disease or a unit, instead of the name covering a conglomeration of maladies.

It is, indeed, refreshing to meet with something of independence of thought in a writer, and this, together with the useful incidental observations scattered throughout these volumes, will pay the reader for the labor that is necessary in order to master them. We commend not the theory, and yet this word in commend of the books. P.

A Text-Book of Vegetable and Animal Physiology, designed for the use of Schools, Seminaries, and Colleges in the United States. By HENRY GOADBY, M.D., &c., &c. Embellished with 450 illustrations. New York: D. Appleton & Co., pp. 313.

This book is intended to be, as it certainly is, entirely different from the ordinary physiologies for schools. Of those productions we have had repeated occasion to express our opinion, which the progress of

time confirms, and with joy we hail the appearance of this book, as a substitute for them.

Who Dr. Goadby is no microscopist needs to be told, for at every turn he finds himself indebted to him for many valuable aids in his manipulations. To others it may be sufficient to say, that he was formerly Dissector of Minute Anatomy to the Royal College of Surgeons, (England,) and is now Professor of Vegetable and Animal Physiology and Entomology in the State Agricultural College of Michigan. It is in this last institution that he has felt the need of a text-book for his classes, different from those in common use, and this volume results from the demands of his necessity. It is not an attempt to teach a smattering of human anatomy, nor does it aim to make Charlotte and Nancy perfectly familiar with all the knotty questions of physiology; but by combining instruction concerning the tissues of animals and vegetables, together with their physiological uses and importance, it opens a field fitted to interest the most refined girl, and yet worthy to call out the more vigorous powers of young men. The youth of either sex are always interested in the study of vegetable and animal life, and it is a fitting recreation for the interval between severer studies, calling as it does for the exercise of careful observation, and inevitably leading to a profounder admiration of the perfectness of God's handi-work. Few, except medical men, who have been trained to it, can avoid a feeling of disgust at the plates illustrative of the contents of the human abdomen, or of the dissections of the muscular system of man, which *adorn* the ordinary text-books on physiology, and if the question of their utility is mooted, it must be acknowledged that there is none, or at any rate not more than there is in the study of the *volvox*, or the beautiful rotiferæ, which can be examined with the most unalloyed pleasure. Dr. Goadby then is right in substituting for the disagreeable study that which is pleasant, and in endeavoring to introduce the study of comparative histology and physiology, in place of the subdivisions which pertain only to the human race.

The plan of the work is this: It is divided into ninety-six chapters or lessons, as they are styled, twenty of which are included in Part I., which treats of vegetable tissues, the remainder coming under Part II., which treats of animal tissues. It is difficult to give an analysis of these lessons, because they are themselves very much condensed, sometimes to a degree which seems faulty, though we do not see how it would be easy to avoid it where there is so much to be said. In general, however, of the first part, three lessons are of an introductory

character, in which general topics are discussed, as the general position of physiology and histology, the nature of cells, their mode of growth and reproduction, and their similarity in plants and in animals. The proper consideration of vegetable tissues is then taken up, and in this order: Starch, gums and sugar, oils, wax, chlorophylle, resinous products, caoutchouc, raphides, sclerogen, vascular tissue, ducts of different varieties, silica in its various situations, hairs, cuticle, leaves, endogenous and exogenous stems, medullary rays and bark. The same general method is observed in the second part, in treating of animal tissues. After considerations of the original compounds of animal bodies, the subject of cells is taken up, and their use and functions in different tissues and fluids shown, and as illustrative of and depending on these doctrines, the nails, the hair, and the epithelium are spoken of. Then the organs of nutrition are described, commencing with those in the lowest grades of being, and rising gradually to the mammalia and man. Twenty-nine lessons are thus occupied, while eight more treat of the structure of the teeth, of the salivary glands, and of the properties of the gastric juice and mucus. Three chapters on muscular fibre are followed by nineteen upon the nervous system, the development of which is traced, like that of the organs of nutrition, from the most rudimentary forms, as in the entozoa, up through the various grades of life to its highest development in man. The remaining lessons are concerning the eye, it being described in the annellata, crustacea, myriapods, insects, arachnida, fishes, reptiles, birds, mammalia and man.

Scattered throughout these chapters are valuable digressions, of a practical nature, which naturally grow out of the subject, and are quite as likely to attract attention and to be remembered, as if they had been prefaced by more formal introductions. In one of these digressions the author attributes the death of the late Lorenzo B. Shepard, Esq., to bathing immediately after a full meal; and it may be worth while for us to correct him, as we happened to be called to see Mr. S., by stating that he had not breakfasted when he went to bathe, but intended to do so afterwards.

In a foot-note we find a singular statement concerning the intestinal villi, which so entirely differs from the ordinary teachings concerning their mode of absorption, that we quote it entire:

“Thirty years ago, during the author’s studentship, desirous of obtaining information on this subject, he killed a cat, and proceeded to examine the small intestine as rapidly as possible. He saw the sum-

mits of the villi *all open*, apparently as wide as their own diameter, but they soon closed up, and remained shut.

Subsequently he repeated this experiment to a party of distinguished medical men in London, including some of his teachers.

Having to arrange the preparation under the microscope, he again saw the same sight, but, owing to the rapid loss of vitality, the villi so soon closed that not more than two or three of the gentlemen present had an opportunity of seeing anything of this interesting exhibition, and then so hastily that it was far from satisfactory to them. He has not since repeated this experiment."

It may be worth while for some of our physiologists, who are skilled in vivisection, to repeat this experiment, and see if they can attain similar results. Certainly the doctrine which is usually taught on this subject is very different. Is it erroneous?

A word is due concerning the wood-cuts, which are profusely scattered throughout the volume. They are made by white lines on a black ground, a method which is frequently used by the French, and which seems to possess several advantages over the more common methods of illustrating by black lines on a white ground. This must very materially diminish the expense of the wood-cutting, for the labor is very much less. The lines are drawn with more sharpness, and thus there is more spirit in the cut. To quite a number of them color has been added, and the effect of imitating the appearance of microscopic injections is admirable. All are creditable to the young artist who executed them. To find so many new cuts and so few old ones is as agreeable as it is unusual, and adds not a little to the pleasure of the reader.

In conclusion we may say that this book seems to us to be well adapted as a text-book for the classes for whom it is designed, and is worthy of general trial in place of those physiologies which are now in use, and which are of little benefit, we hope they are not very injurious, to the youth in whose hands they are placed.

P.

A Practical Treatise on the Causes, Symptoms, and Treatment of Spermatorrhæa. By M. LALLEMAND, formerly Professor of Clinical Surgery at the University of Montpellier, &c. Translated and edited by Henry J. McDougall, M.R.C.S., &c., &c. Third American edition, pp. 328. *On Diseases of the Vesiculæ Seminales, and their associate organs, with special reference to the Morbid Secretions of the Prostatic and Urethral Mucous Membrane.* By MORRIS WILSON, M.D., pp. 52.

The American republishers of these two treatises, Messrs. Blanchard & Lea, have united them in a single volume, which their dimen-

sions will readily permit, and which adds to the convenience of reference to them.

The former has been too long before the profession to need any minute account of this its third edition in this country. It remains the standard authority upon the subject, and thanks to Mr. McDougall, it is in a form much more convenient than that of the original work.

Dr. Wilson's essay covers much of the same ground, though in a more condensed manner, and with some additional and interesting observations upon the use of remedies. It makes a very good digest of the latter observations upon this malady.

In speaking of various remedies, Dr. Wilson recommends the use of cod-liver oil, and speaks thus of his mode of exhibiting it:

"The chief objection which may be raised against cod-liver oil, is its aptness to occasion nausea, a circumstance which arises partly from the weakened powers of digestion, and partly from the large quantity usually thought necessary to be administered. The objections to this remedy, are in many instances got over by a preparation which I have found of great value, namely, the cod-liver oil of chocolate. It is composed of the purest oil, carefully combined with chocolate in its most agreeable shape. To cover the odor and taste of the oil as completely as possible, various essential oils can be added to the chocolate, by which means it becomes a pleasant article of diet. Prepared in this way, the oil is much less likely to occasion nausea, or otherwise to interfere with the delicate digestion that patients suffering from spermatorrhœa are so liable to experience. the division of the particles of the oil by chocolate, itself a highly nourishing substance, renders the compound very easy of assimilation by the system."

The treatment of spermatorrhœa is always difficult. The phases under which it makes its presence known are so numerous that it would be difficult to detect were the patient to aid in its discovery. But this, sometimes from ignorance, sometimes from shame, he does not do, and it is only when the physician has detected the cause of disturbance at some unguarded opening that the patient becomes his ally instead of his opponent. A careful study of these treatises is therefore a necessity to him who would be fully prepared to encounter this malady, and to such we commend it.

But prevention is far better than cure, and this duty devolves upon medical men. They should let it be known that too much care cannot be exercised in guarding children, while still very young, from falling into this habit. The separation of the sexes in a family of children

should always be insisted upon, and it is better to separate individuals of the same sex. Years of sound health will repay years of wretchedness and care, while regret will never fail to attend upon the sad efforts of careless neglect.

An Essay on the Pathology and Treatment of Scarlet Fever. By CASPAR MORRIS, M.D., &c., &c. Philadelphia: Lindsay & Blakiston.

The perusal of this essay has afforded us great pleasure, marked as every page is by common sound sense, and with the evidences of thoughtfulness and good judgment. Dr. Morris has had many opportunities for seeing the fearful disease which is the subject of this paper, and has improved them. He has seen it under a sufficient variety of circumstances to know that it is one of the most, if not the most, treacherous of all diseases, and that there is no specific remedy for it. Neither does he hesitate to acknowledge that patients do die from its effects while under his care. All of these things lead the reader who has had any experience with scarlet fever, to far greater confidence in his statements, and to place much more value on his recommendations than if he had proposed to write on the *successful treatment* of the disease.

A former edition of this essay has been for some time in the hands of the profession, and it is therefore unnecessary for us to dwell upon its doctrines; but by the addition of new matter, it is made to be fully up to the experiences of the present day, and we confidently commend a careful consideration of it, especially to our junior brethren.

We believe Dr. M. is in error in his view or suspicion, as he terms it, of the relation of diphtheritic croup to scarlet fever, to wit, that the former is only a variety of the malignant form of the latter. The preference which the disease shows that the larynx as its point of attack, together with the prostration of the vital forces which its progress induces, eminently fit the patient to be attacked by *diphtherite*, just as in other cases it makes way for rheumatism without rheumatism being a variety of scarlet fever.

With gratification we notice his appreciation of the excellent effects of capsicum, and his commendation of the homily but admirable mixture of a teaspoonful of capsicum, as much salt, a large spoonful of vinegar, and half a pint of boiling water. The dose of this, is a small

teaspoonful every hour or two for a child five years old, and we know it is very grateful and very beneficial in many instances.

Appended to the essay is a paper by Dr. William Douglass, of the epidemic of scarlet fever in Boston, in 1735 and 1736. It has a scientific as well as historic value, and is entitled "The practical history of a new epidemical eruptive miliary fever, with an angina ulcerculosa."

Dr. Morris' style is a very pleasant one, and the publishers have been careful to give it a fitting typographical dress. P.

A Manual of the Practice of Medicine. By T. H. TANNER, M.D., F.L.S.C., &c. First American edition from the Third Revised and Improved London Edition. Philadelphia: Lindsay & Blakiston. 1858.

This little volume, designed for the use of students and over occupied practitioners, must suffer the pains and penalties of its class. The objections to all "manuals," are, that from the nature of their construction they are apt to lack unity, clearness, and a necessary fullness; that their effects upon a student's mind is not provocative of further investigation; and that a sole or customary reliance upon their teachings begets a low standard of attainment in the branch whereof they treat.

If, however, as seems here to have been successfully attained, there be condensation without obscurity; a judicious winnowing of medical truth from much chaff; a correct dealing with principle; a proper acquaintance with the present position of our science; and if, moreover, regarded by student and practitioner not as an ultimate authority or guide in practice, but as indicative of the proper path to follow, and suggestive of further inquiry, we do not know but the little work before us may have a useful mission.

We quote the concluding sentence of the author's remarks on inflammation, as showing the catholic tendency of medical teaching at the present day on the question of nature and art in the cure of disease. "From all this, it follows, that in the treatment of acute inflammatory diseases, practitioners must be content to trust more to nature and less to heroic remedies than they have been in the habit of doing; for it is highly probable that though we may be able to guide inflammations to a successful termination, yet we cannot cut them short, and any attempts to do so will merely increase the patient's danger."

The work contains an appendix of numerous valuable formulæ—a classified list of mineral waters—a table of the proportions of active ingredients in some important preparations, and a copious index. L.

Pathology and Treatment of the Paralysis of Motion. By J. P. BATCHELDER, M.D., New York.

In the pamphlet of sixty-two pages, entitled as above, the author has given scientific and practical reasons for the employment of a valuable adjunct to medical practice, which has been too positively excluded from use on account of its irregular source, and its intimate association with some parasitic offshoots of our profession. Medical gymnastics, or active and passive muscular movements directed by an intelligent medical man may become a means of great usefulness, and in this valuable monograph we find the results of such a direction of movements applied to that disease called paralysis of motion.

Dr. Batchelder, however, does not consider this form of paralysis as a disease, "but the symptom of one, which mainly affects the voluntary muscles, or the muscles of animal life. The non-communication of the appropriate stimulus to these muscles by the mind constitutes the disease, of which the paralysis is a symptom." As a consequent of this a habit is formed which adds to the difficulty, so that from a constant failure of the proper stimulus morbid conditions arise, of which the paralysis is also a symptom.

In two points of view then is paralysis to be considered a symptom: 1st. In relation to the functions of the affected muscles. 2nd. In respect to their physical condition.

When a person is affected with paralysis, he is at first unable to perform any voluntary motion on account of an interruption in the line of communication of the nervous stimulus, or from the failure in those cerebral changes which induce these motions. After the primary cause is removed the quiescence which has degenerated into a habit continues, and the will is powerless, the attendant cerebral changes not taking place.

Dr. B. proposes to recover the lost power "by causing the members to perform the motions calculated to produce the changes in the brain. The motions first, and the changes in the cerebrum next, is the order and method of nature."

There are different conditions of the muscles in paralysis, which according to Dr. B. require separate attention; some are powerless, some

contracted, some acting irregularly, but generally speaking "all concur in disregarding the volitions of the patient."

From these conditions the following indications of cure are deduced:

1. To restore strength to the powerless muscles.
2. To overcome abnormal contraction in others.
3. To obviate or counteract the perverse action of such as act irregularly.
4. To renovate the will, and reconnect it with the affected muscles.

In the treatment proposed to meet the first two indications, Dr. B. makes use of an "agent inherent in the muscles themselves, called by modern phynologists, 'passive contraction.' This power causes a muscle to contract and shorten whenever its origin and insertion have become approximated." Thus by bringing the origin and insertion of the muscles as near as possible together, and retaining them in such a position by mechanical means until this "passive contraction" has taken place a certain degree of power is restored to the paralysed limb. The apparatus is occasionally removed and the limb moved in different directions, the attention directed to these movements, the will taught to assist by concentration of effort upon them.

The perverted or irregular actions of muscles are also met by mechanical appliances until the one or the other yield to well directed efforts which are more or less under the control of the will.

The first three indications point directly to the fourth, which is, in fact, the ultimate object aimed at, viz: To renovate the will and reconnect it with the affected muscles.

This is effected by educating the will. The passive movements, the mind constantly directed towards them act through the peripheral brain and gradually produce those cerebral changes which precede consciousness. This being frequently repeated, the will gradually awakens, regains power by degrees, and finally ends by producing those movements which are at first passively made.

This constitutes a brief synopsis of the main points in Dr. Batchelder's excellent paper. The remedies principally used in the treatment of paralysis as electricity, galvanism and strychnine, according to Dr. B., have been employed rather empirically than scientifically. They should be used, he thinks, with great caution, and for the purpose of exciting motions, to which the mind should be directed, as already explained.

This paper cannot fail to attract attention, as it explains physiologically, and by the record of several cases, an easy, efficacious and scientific method of treating a serious form of morbid manifestation. D.

New American Cyclopædia. Vol. iii. BEAM—BROWNING. New York: D. Appleton & Co. 1858. pp. 768.

The third volume of this great undertaking, by Messrs. Ripley and Dana, is now lying before us, and gives us the right to say that the Cyclopædia is destined to displace all books of a similar kind from the shelves and tables of students. It is a real comfort to look over its clearly printed pages, for the purpose of getting concise information on such subjects as our time will not suffer us to examine at great length; and we regret that the whole alphabet is not furnished us, as our experience with two of *its* letters bids us believe that the rest of their brethren will be quite as full and accurate as they are. What surprises us, is the correctness of its estimate of living persons with so little of that wholesaled praise or detraction which generally accompanies all such notices. We hope that the publishers will be encouraged by a large sale of this very useful publication, so that they may be repaid liberally for their outlay. No one who purchases will regret the expense.

L. H. S.

PROCEEDINGS OF SOCIETIES.

Academy of Medicine. Dr. J. P. BATCHELDER, *President.*

[Prepared for the MONTHLY, from Dr. GEORGE F. SHRADY'S Verbatim Report.]

The discussion on the structure and functions of the Prostate Gland commenced at an extra session of the Academy, in June, was renewed at the regular meeting in August. Dr. VALENTINE MOTT, who was present, was called upon to open the discussion. Although he was not aware at what point the subject had been left, he would at that time make a few remarks upon the Relative Anatomy of the Prostate, reserving the discussion of its diseases until another session.

The prostate gland, said Dr. Mott, was situated in the pelvis, equidistant from and on a line with the rami of the ischia, above the membranous portion of the urethra, and upon the rectum, where there is no interposition of peritoneum by the lower part of the bladder, called the *bas-fond*. It is ordinarily supplied with a fair amount of vessels, and in a surgical point of view, it is important to remember that the little vessels which supply it in its normal state are unimportant; but if we regard them closely in disease we will find they assume a great

importance. Let us examine these vessels; let us take up the veins. These are very remarkable—remarkable in their number—remarkable in their size, and are principally interesting in connection with the troubles which arise in this organ. When these veins are cut, even in the middle period of life, a great flow of blood will follow; so great that after the lateral operation for stone, I myself have been very much alarmed at its quantity, and have feared the consequences of it. During the whole course of my surgical experience, now extending over more than half a century, I have rarely been surprised at any great loss of blood, except from these parts. It seems to be unimportant until about a week after the operation. At that time, I have sometimes been informed of the sinking condition of my patients, and have found them almost pulseless from the loss of an enormous quantity of venous blood. Generally, at the commencement of the operation there is some arterial hæmorrhage, which is trifling in comparison with the subsequent venous hæmorrhage, which, in some instances, has compelled me to plug up the opening with a sponge, taking the chance of the blood accumulating in the bladder.

The veins that are about the neck of the bladder run in such a way that they are always necessarily cut in the operation I shall presently describe. Under certain circumstances, these veins are in a varicose condition; nor is this condition confined to the later periods of life, for we meet it frequently in early life. The collection of veins in this region is so large, and they are so numerous, that they go by the name of *venæ pampiniformæ*. They run immediately over the proper capsule of the prostate and open upon the free surface of the bladder, and are undoubtedly the source of the very serious hæmorrhage that sometimes takes place late in life, when there is no disease of the prostate, no tumor of the bladder or other cause to account for it.

These veins are ordinarily the only vessels of any considerable size involved in operations around these parts, but occasionally arteries are met with running between the proper capsule of the gland and the ilio-vesical reflection. These arteries are of considerable size, coming, as they sometimes do, from the internal iliac instead of the internal pudic, and distributed to the bulb, crus and dorsum of the penis of that side. These vessels have been described by Haller, Burns, Barclay, and also by one of the Munroes. Whenever a profuse hæmorrhage occurs from an operation about the prostate gland, in which the gland is cut, if the internal pudic artery is not wounded, then it is gratifying to know that an artery of the description referred to runs in that di-

rection, the hæmorrhage from which, when cut, can be arrested only by the sponge.

The relative surgical anatomy of this gland is exceedingly interesting. Though for many years not well understood, it is, perhaps, now fully known and developed.

The prostate is described as consisting of two lobes, and perhaps we are not all prepared to know the fact that these lobes are very ill defined after the adult period; but we know the fact, that before the fourth or fifth month, it consists of two distinct lobes, separated by an isthmus which becomes in adult life the third lobe.

This gland has its proper capsule, and is a secretory gland; but whether conglomerate or follicular, is yet a subject of discussion.

The observations of Amusat have fully settled the question that the prostate gland is entire above the urethra—that it runs over the anterior part, and therefore surrounds it.

Besides this capsule there is another—the fascia iliaca.

This fascia covers the iliac muscles, goes over the pelvis under the great vessels, then down the side of the pelvis, and from thence to the bladder, being previously attached to the side of the bladder, where it forms a perfect septum between the perineum and cavity of the pelvis. This is a most important fact to be remembered in its relation to the operation for lithotomy.

This ilio-vesical fascia passes from the pelvis to the side of the bladder at an angle which, when we are erect, is some 10° or 15° more above the plane of the pelvis than when we lie down. From the side of the pelvis to the bladder it is covered by the levator ani muscle. When we get down to the side of the bladder, just above its neck, there is a close layer of this fascia, which goes over the prostate, enveloping it next to its proper capsule. So far its anatomy is well understood.

Every sub-pubic operation, with the exception of the recto-vesical, involves the direction of this fascia, and upon maintaining the integrity of this septum—thus guarding against urinary infiltration—the success of these operations, *ceteris paribus*, depends.

I maintain that operations for lithotomy ought always to be performed with reference to this septum, otherwise the patient's life is greatly in danger.

Nothing has glorified modern surgery more than the study of relative anatomy. It has dignified operative surgery as a science, and he who does not cultivate this study operates in the dark. This knowledge is beautifully illustrated in the anatomy of the groin, in the im-

portant relations of the epigastric artery to the internal and external abdominal rings. It is not every one who teaches who points out the relations of these parts. To operate successfully, the surgeon must first familiarize himself with the parts to be operated upon.

The common operation for lithotomy most in fashion is the lateral, known from the time of old Friar Jacques. It divides one side of the prostate only, and goes parallel with the iliac fascia, and not above it, and does not open into the cavity of the pelvis. He who performs the operation with reference to these points will be most successful.

I say as I have said for many years, that all these operations are better done with some sort of a knife than with any other instrument whatever.

Without arrogance, I may say that I have performed more operations for stone than usually falls to the experience of surgeons. The number amounts to 164, and I have never used in the operation anything but a knife or bistoury. Upon the whole I prefer a straight bistoury. I was occasionally in the habit of using Mr. Thomas Blizard's knife. Of the gorgets introduced by Cline and Physic I consider that of the latter the best. Cline's is a dangerous instrument. I have seen him use it. Physic's is a dangerous instrument also, unless one well understands the relative anatomy of the parts. This knowledge was not in the fashion in his day.

The knife goes through one side of the prostate and below the loose layer of the fascia iliaca. Contrary to the opinion and method of many, I cut through the whole prostate. I never wish to tear it. If you are below this fascia you may cut to the ramus of the pubis without danger. Those not familiar with the use of the gorget, by depressing the hands elevate the blade, and consequently go too high up and incur the danger alluded to.

I never cut the internal pudic artery with the knife, because I cut downwards and outwards in such a way as not to encounter it. I look upon it that the operation can be more easily performed in this manner.

Some cut through eleventh-twelfths of the gland, and tear the rest. I know enough about wounds to say that lacerated ones are bad ones to heal any how, and you had better make a clean cut. The idea has been entertained that by cutting entirely through you cut this fascia, but having an eye to the course of it there is no danger.

The bilateral operation is entirely free from wounding the int. pudic artery; but I must say that I never saw the elder Cline, the preceptor of Sir A. Cooper, operate for stone, that he did not cut that artery.

I have seen the hæmorrhage so profuse that it would run off the table in a stream, and saturate the bed, and even run through it; I choose to avoid it.

In regard to opening the bladder in different ways, for the purpose of evacuating urine, there is no danger, except in the perineal cut.

The operation per rectum is unattended with danger, not involving the fascia, and is therefore resorted to when the bladder is to be emptied. One thing I will say, that during the many years I have practised surgery, it is gratifying for me to look at this fact in connection with my life, *that I never punctured a human bladder*. I am always horrified when I hear a man has punctured the bladder. I have never seen a case of stricture that could not be relieved by the judicious application of instruments.

In that disease of the prostate confined to old people, I have never failed to introduce the long catheter, even though others had repeatedly failed in the attempt.

At a special meeting of the Academy on September 9th, Dr. Mott continued his remarks as follows: Besides the covering mentioned at the last session, at which the prostate gland was discussed, this gland has a closer covering or capsule, which is the ilio-vesical reflection of the fascia iliaca as it comes from the side of the pelvis and goes to the side of the neck of the bladder. We have here also the levator ani muscle covering both portions of this fascia iliaca. The prostatic portion of the levator ani, as well as where it slings the membranous portion of the urethra, must be cut in the lateral operation for stone in the bladder.

The *sinus pocularis* or *utriculus prostaticus*, situated a little in advance of the veru montanum, has been considered by Weber as a rudimentary uterus; a homologue of that organ, probably because Morgagni found in two instances that the vesiculæ seminales terminated in it. In a surgical point of view this little cup should be remembered, as a catheter or bougie will be easily caught in it. This can always be avoided by an experienced surgeon, by withdrawing the instrument a little and tilting it up before passing it into the bladder.

The veins about the neck of the bladder in a person advanced in life will have in them what pathologists denominate *phlebolites*. It is from these veins that proceed the alarming hæmorrhage of which I have already spoken. It seems to be confined to operations that are performed on persons over 50 years old. For myself, I have operated on individuals over 70, and have not found these veins so troublesome in advanced age as in middle life. Neither the unilateral or bilateral

operation avoids these veins; the only way is to operate above the pubis, which is seldom done in this country.

Dr. Mott then proceeded to speak briefly of the *Diseases of the Prostate Gland*.

The morbid anatomy of the prostate is exceedingly interesting, involving as it does so many terrible and afflicting affections. It is a very singular fact, although we are well acquainted with it, that this body will frequently enlarge when other parts of the body are diminishing and shrivelling in the decline of life. But this is not the only disease of this organ. There are affections of it that are very formidable besides the mere hypertrophy.

And first of *Atrophy*. This gland has been found diminished in its natural size; its proper capsule has been seen filled with an aqueous fluid. The atrophied condition of the gland has been described by many pathologists, and particularly by Sir Benj. Brodie and Mr. Cooper. It is not necessarily confined to youth or old age; it follows no stated law, but arises at any time.

Inflammation of this gland occurs more frequently than we are aware of; whether it be of the secretory portion, or of the filamentous or areolar tissue of the gland I shall not stop to inquire; my impression is that it is an inflammation of the entire tissue of the gland. The symptoms are, remarkable tenderness on introducing the finger into the rectum. When this extreme sensitiveness exists with difficulty of passing water, it is evidence to my mind that the gland is very much inflamed. Suppuration may occur in this gland, as we know from cases recorded by such observers as Lallemand, Sir Benj. Brodie and others.

Inflammation of the prostate may be occasioned by the violent use of instruments, sexual indulgence, onanism, urethritis, &c.

Suppuration of this gland generally takes the route into the urethra, so that Lallemand states that he has seen the openings from the prostate large enough to admit the end of a catheter, from which openings pus escaped into the urethra. It will sometimes make its way through the rectum, sometimes into the perineum, both of which I have seen.

Inflammation of this gland may be followed by the deposit of a large quantity of pus. Brodie says as much as a pint was discharged at several different times from a case he saw.

Ulceration is a process not common in the prostate. It has occurred from the introduction of instruments into the urethra, which in-

duced inflammation, accumulation of pus, pressure on the gland, and ulceration.

Tubercles are occasionally met with in the prostate, and from softening progress to ulceration. Lallemand records an instance in which thirty abscesses and as many tubercles were found in this gland. The prostate is therefore liable to the same condition of things we find in the testes, mesenteric glands, vesiculæ seminales, and the lungs. Dr. Gross relates a case of tubercles in this gland, and states that they follow the law of tubercles in other parts of the body.

Again, the prostate is said by some to be liable to *cancer*. If we adopt the language of Mr. Walshe, that all forms of disease that are heterologous are cancerous, we consequently may have it here. I prefer, however, the old arrangement of cancer and malignant disease, or what does very well, hard and soft cancer. I am well aware that they both have the microscopic characteristics of cancer. These malignant forms of disease occur within and about the prostate. The body of the prostate is not so apt to be involved as in other forms of hypertrophy.

There are three instances on record—one by Sir A. Cooper, one by Mr. Stanley, of London, and another by Mr. Langstaff—of malignant disease in this gland in children, showing that it is not necessarily confined to old people.

The great Dr. Fothergill, of London, died of malignant disease of the prostate. Some few years ago I had a case near this city, which was evidently a fungous growth about the prostate, and resembled that of Dr. Fothergill. I have seen another instance where the tumor was not of the prostate, but a polypous growth, which acted as a valve, and gave rise to the strongest symptoms of stone in the bladder. This should teach us that nothing but a sound grating against another hard substance should justify the operation for stone in the bladder.

The last affection of this gland I shall name is *senile hypertrophy*. It is a curious fact that it should occur in advanced life, and be confined to the gland itself. A dissolute life is not necessary to produce it. The most tormenting part of this enlargement is the third lobe of Sir Edward Home—the pathological lobe of Velpeau. It is of a remarkably hard texture. Brodie speaks of it as having a stony hardness. Rokitsansky calls it a fibrous enlargement, others denominate it cystic hypertrophy on account of the cyst found in it.

This enlargement comes on very gradually, and is not at first accompanied with much pain. The first symptom is difficulty in evacuating the last remnant of water that is in the bas-fond of the bladder. Change of position has to be frequently resorted to, and persons with

this difficulty make water better standing up. Some are obliged to get down on their elbows, so as to give the bladder an opportunity to force the urine over the third lobe.

With all our resources of treatment we can make very little impression upon the prostate affected by senile hypertrophy. In a difficulty of this kind it is of great importance that a person should not have his bladder over distended. Everything that removes irritation is of the greatest importance, and therefore it is often requisite to relieve the bladder by means of the catheter. I know of no other treatment than palliative; I have seen more good derived from a seton in perineo, at the same time keeping the bladder empty and the bowels soluble, than from anything else.

The question of the removal of this third lobe has been raised, and several instruments devised for that purpose are here submitted for the examination of the Academy.

Finally, gentlemen, let me call your attention to one other affection analogous to that called by old Father Pelletan "engorgement chronique de la membrane du larynx;" I mean the *uvula vesicæ* of some—the *luette vesicale* of others. Dr. Baillie first described it as a membranous fold, in the form of a bar across the vesical orifice of the urethra, and has given a plate of it in his *Morbid Anatomy*.

Immediately at the neck of the bladder there will be an enlargement of the mucous membrane, sometimes from above downwards, but more generally laterally. This gives rise to much difficulty in passing the urine. The catheter passes readily. Sometimes it is very difficult to form a diagnosis between it and enlarged prostate. In the *uvula vesicæ* the catheter passes very readily. In prostatic enlargement there is frequently great difficulty.

Any instrument passed into the bladder will generally be followed by a small discharge of blood, which alarms the patient, who thinks it arises from want of skill on the part of the operator, whereas it is desirable and beneficial. In the opinion of Guthrie this is a curable affection. Le Roy d'Etiolles has great confidence in scarifications. These, with the application of caustic, constitute the principal means of treatment.

The same principle of treatment has been applied to a similar affection of the lips of the glottis by two distinguished fellows of the Academy, Dr. Gurdon Buck and Dr. Horace Green.

Academy of Medicine.—Obstetric Section. Regular Meeting, June 21st.

[Reported by GEORGE F. SHRADY, M. D.]

After the minutes of the meeting were read, *Dr. Barker* said, that with the permission of the Section he would relate a case which had recently occurred to him, having a bearing on the discussion of the last meeting, in which he had substituted turning for the forceps, for a reason which he believed to be unique. It was the seventh labor in a lady of large frame and very full habit, whose former labors had been very severe. The child was lost in the fifth and sixth, and she was very dangerously ill for some days, having convulsions during and after-labor.

In this labor she was attended by *Dr. Parker*, and after some hours she had a severe attack of convulsions. I saw her soon after the eclampsia. She was bled freely, losing fully a quart before a decided impression was made on the system. She was then brought under the influence of chloroform, and had no more convulsions. If allowed to come out from under the effect of the anæsthetic she complained of headache and specks before the eyes. The uterine contractions were very feeble, with very long intervals. Being very anxious to save the child, we determined to hasten the labor as much as possible, and to deliver by forceps as soon as the first stage should be completed. Uterine contractions were excited by pressure over the fundus and dilating the os tinæ by the finger. It was nearly four hours before the os was sufficiently open to justify the attempt to use the forceps. I then passed my whole hand into the vagina, to protect the soft parts of the mother, as is my usual custom when using the forceps with the hand at the superior strait, when I discovered the cord pulsating very feebly, and wound three times around the neck. I then hesitated as to the propriety of using the forceps, for if the cord should happen to be very short, not only would the life of the child be imminently jeopardised, but that of the mother also from forcible detachment of the placenta, particularly as we had great reason to apprehend inertia of the uterus after delivery. After some discussion we decided to substitute turning for the forceps, as offering a better chance for both. Version was accomplished very easily, but the forceps were necessary for the extraction of the head, which was a difficult operation. The child was still-born, but by the use of *Marshall Hall's* ready method, and other means, it was resuscitated in the course of three quarters of an hour. Both mother and child are now well. The cord was very short, the portion not around the neck being less than five inches. I

believe that by any other method of procedure the life of the child would certainly have been sacrificed, and in all probability that of the mother also.

Dr. Gardner asked if he (Dr. B.) could not disengage the cord when his hand was introduced?

Dr. Barker said he tried, but could not succeed.

Dr. Gardner stated that he delivered a head in that situation with his tractor, and it served very well.

Dr. Sewall asked how long Dr. B. would think it advisable to keep up the efforts at reanimation?

Dr. Barker. It varies with the different circumstances of the case; if the child continues warm and the slightest pulsation over the heart can be detected, I should continue my efforts for two or three hours at least. Dr. Budd had one successful case after 3 hours' continuous efforts.

Dr. Shanks thought that Marshall Hall recommended not less than two hours.

Dr. Barker then announced the subject for discussion;

Removal of the Placenta, in the early months of Pregnancy, by Evulsion.

Dr. Gardner stated that the proposition he made in his paper was in connection with operations upon the os in an undilated state. The placenta in these cases is frequently retained, and it is difficult to prevent excessive hæmorrhage. In these cases he introduced a small pair of polypus forceps and withdrew the placenta. The great difficulty to surmount in these cases is, that the orifice is very small, and the placenta is very broad. In this connection, he referred to a case that had come under his notice, where a lady had been subject to little oozing hæmorrhages for a time, when suddenly the blood came in gushes. The tampon was used, but the blood trickled through, then the polypus forceps was introduced, the placenta, &c., removed, and there was a cessation of the hemorrhage at once. In another similar case, a patient of Dr. Douglas, he removed an ovum about 3 months old, exactly the same way. In this instance the ovum was partially detached.

Dr. Hubbard stated that he had never used any instruments to take away the placenta in cases of abortion. I have had, said he, a good many cases of flooding and abortion, and my rule has been to keep the patient in a recumbent posture and to use the tampon. What I consider to be the best is powdered alum placed on a cloth, tie it up and put it against the os, and then behind that a firm

sponge, in a more or less dry state; as the blood passes in it becomes large and fills up the cavity of the pelvis. In almost every case it has ceased without any further trouble, by compelling the patient to keep quiet for 2 or 3 days.

I was called to a case of severe hæmorrhage where the patient was between 30 or 40 days pregnant. On examination, I found that the mouth of the uterus was easily dilated; passing my finger in beside it, I attempted to detach the placenta with my finger, I took it all away, and I have now a smaller specimen to show than any other that I have seen. The embryo is about the size of a kernel of wheat.

I can readily conceive of cases where an instrument, such as described by Dr. Dewees, for removing the placenta can be used. I think it is seldom that instruments are required; I think the instances very rare where hæmorrhage cannot be arrested by some of the means referred to. The tampon will form a clot, stop the vessels, and then dilate the os.

Dr. Sewall—Is there any difficulty in introducing these forceps? May they not go wide of their mark?

Dr. Gardner—If the placenta would be entirely adherent, (which it never is in hæmorrhage,) then there would be great difficulty; but you will always find some portion of the placenta torn off, and you can grasp it without difficulty. Very frequently the placenta is entirely detached.

Dr. Sewall—Why would not ergot be serviceable in those cases?

Dr. Gardner—There is too large a mass to go through such a small opening. He stated, in the early months in operations about the uterus, he had great difficulty in preventing the uterus from slipping about; to obviate which he used an instrument that was so constructed that the end of a shaft could be bent at right angles, and thus the uterus be fixed in a position desired.

Dr. Martin—I have been placed in a situation where I would have been glad to have had an instrument; I believe Dr. Churchill's instrument would answer every purpose.

Dr. Shanks—I have been called to several cases of adhesion, but I have never yet had any difficulty with regard to the placenta. When the fœtus came away, and there was considerable hæmorrhage, I have found upon examination that, perhaps, there had been some coagula within the lips of the uterus. In such cases I have generally applied a bandage, giving cooling laxative medicines—a solution of salts with a little rose water or sulph. acid arom. I have been called to cases that have lingered for some days. In one such case, I recollect particularly,

when insinuating my finger within the os I discovered the placenta embraced within the lips of the uterus. It came away without any difficulty, and I had no further trouble.

He referred to the case of a clergyman's wife, he was called to see, who had an occasional hæmorrhage for a week or ten days; examining for the cause of the trouble, he discovered a detached placenta, three or four inches in length by one and a half in width, which he withdrew. There was no more difficulty afterward. He never had any occasion to use an instrument.

Dr. Sewall referred to two or three cases of retained placenta which were treated with the tr. ergot, separating the placenta, which before was inaccessible.

In the first case there was frightful flooding, the hand was introduced and nothing could be discovered. Ergot in connection with opium was administered. In a few hours the placenta was just within the mouth of the womb, where before nothing could be found. The hæmorrhage ceased and the woman recovered.

In another case, four months gone, a woman aborted; she had been bleeding more or less for a month, having had no physician, hæmorrhage coming on every day or two. In that case a drachm of tr. ergot was administered. In a few hours after the hæmorrhage ceased, and the placenta came away. She made a slow but very good recovery.

In another case a woman who was in the habit of aborting, four months gone, had the fœtus fall upon the floor. A physician was called in, and the necessary remedies were prescribed. The next day noon violent flooding came on. She sent for a physician, and he gave her some ergot; while the physician was gone flooding came on, and I was sent for. I found her very low. By this time the physician came, and told me that he had taken everything away. We stimulated her as much as we could, put on a binder and applied cold. While this was going on she had quite an attack of coughing, some clots were expelled, and I introduced my hand, and took away a piece of placenta about the size of a fist. There was no more hæmorrhage. She ultimately recovered.

I suppose that in all these three cases the utmost good was effected by the ergot. It seems to me a remedy of great value, for by its use, though at first we may not be able to reach the placenta, it will bring it so far along as to enable it to be grasped, and its delivery thereby rendered easy.

Dr. Budd felt very much disposed to question the propriety of removing the placenta in the early months of pregnancy by instru-

ments. While the placenta was lying loose he would have no objections to remove it, otherwise he would use the tampon. As far as his experience went, ergot exercised very little if any influence upon the uterus in the early months of pregnancy. He decidedly objected to its administration after very severe hæmorrhage, as he had often found it a direct sedative.

Dr. Underhill—The cases referred to are very common, and the symptoms cause very considerable anxiety, but I never knew a case fatal. It is a point with me when called to a case always to make a vaginal examination; I attempt to relieve it by the finger, and very often I succeed. In other cases I use ergot. When I find that this fails to act, I use the tampon. Dr. U. referred to one case that troubled him a great deal, where he was determined to use an instrument, but getting all ready for it, he found by examination that the placenta was in the vagina.

Dr. Gardner wished to be understood that the instrument which he used was his last and not his first resort in hæmorrhages from miscarriage. He was much in favor of the sponge, introduced in a dry state.

Dr. Underhill—I introduce first the speculum, and through it the tampon, the instrument being gradually withdrawn as the vagina was filled.

Dr. Barker—The subject we have been discussing is a very important one. Patients certainly do die from repeated hæmorrhages following abortion. I can now recall two where hopeless exhaustion had resulted from this cause before I saw them. In one, no physician had seen the case until it was too late to save her, although the gentleman first called removed with ease the portion of the ovum which had remained after the abortion. When I saw her she was moribund. In the other case fruitless, and, in my opinion, injurious means had been resorted to to remove the retained part of the ovum. The hæmorrhage had ceased before I saw her, but all efforts to restore exhausted vitality were unavailing, and she died five days afterward. In abortion no woman is free from the danger of hæmorrhage until the entire ovum is thrown off. Perhaps because I have never been compelled to resort to instruments, such as the placental hook of Dr. Dewees, or the placental forceps of Dr. Bond, and the various other contrivances for this purpose, I have been accustomed to express great doubts as to the necessity of ever using them.

I have no fear of manipulating with the sound in the non-gravid uterus for all necessary purposes of exploration, but I certainly would avoid, if possible, the danger of injury to the internal surface of the

uterus partially developed from pregnancy, when the predisposition to take on morbid action is greatly increased by the interruption of a normal physiological process, and still more increased by loss of blood. There is no question as to the propriety and necessity of at once removing the retained portion of the ovum. The only question is as to the best method of accomplishing this. I have never failed to do this, by the use of the following means: A compressed sponge of the proper size is introduced into the cervix, which not only effectually prevents loss of blood, but excites uterine contractions, so that the ovum or retained portion of the placenta is completely detached. In conjunction with this, I always direct an enema of the oil of turpentine (with starch) to be thrown into the rectum and retained as long as possible, repeating it as soon as it comes away. The turpentine in this way acts not only as a hemostatic, but also as a most efficient oxytotic. I have never—and I have seen some very severe cases—known this method to fail in securing the complete detachment of the ovum, and arrest of the hæmorrhage. I have frequently removed from the vagina at the same time the sponge and the portion of the placenta.

New York Pathological Society. Regular Meeting, March 10, 1858.
Dr. E. R. PEASLEE, *President*.

[Reported for the MONTHLY, by E. LEE JONES, M. D., Secretary.]

Ulcer of Stomach.—Dr. T. C. FINNELL exhibited several specimens. The first was an instance of *Ulcer* of the *Stomach*, occurring in a married woman, æt. 22, who enjoyed good health until a year since; about which time she experienced some little pain of the stomach, and was unable to retain food for any length of time. Occasionally she would suffer from attacks of vomiting and diarrhœa. She continued in this condition, gradually emaciating, but still able to move around, until 10 days since, when she was suddenly seized with a severe attack of vomiting and purging; collapse succeeded, and she died. Some of the neighbors insinuated that she might have been poisoned by her husband. This accusation led to an investigation.

Autopsy.—On inspection this was observed near the pyloric extremity of the stomach. A *round ulcer* about the size of half dollar, involving only the mucous membrane, the other tissues seemed to be normal. Around the margin of the ulceration was a considerable amount of vascularity, and the coats of the stomach were much thick-

ened at that point. He considered it a perforating ulcer of the stomach, which had only gone far enough to involve the mucous membrane, and that had the patient lived longer, it would have completely perforated all the coats of that organ.

Dr. PEASLEE, in reply to a question from Dr. F., stated that the most common position for perforating ulcer of the stomach, was in the left half, and in the anterior wall; that it was usually found in females not far from that age. He could hardly suppose a case of poisoning to be localized like that, and the thickening of the walls would indicate that the change had been going on for a long time; and it seems that nature attempted to arrest the progress of the ulcer by these means.

Dr. GRISCOM referred to a case in the N. Y. Hospital, which had been diagnosticated as ulcer of stomach by his predecessors on duty; the symptoms were, for 17 or 18 months pain in epigastrium and vomiting, no excitement of pulse, failing but not losing flesh rapidly, æt. 25. The patient vomited almost constantly up to 10 days ago, being unable to retain anything upon his stomach but the blandest food. A few days ago, in examining the abdominal region, he discovered a lump in the left iliac region, in the neighborhood of the cœcum. He could not account for it in any way, except that it might be a scirrhus formation, in a very unusual place. Suspecting it might be feces, he directed an injection of warm water to be administered, which was followed by the passage of a great mass of scybalæ. Injections were administered three or four times afterward, which were followed with the same result. At length this lump entirely disappeared, and the patient assumed a different aspect. He had been treated previously with sub. nit. bismuth, issues, &c. The diarrhœa has entirely ceased, and the bowels are beginning to act regularly. He now retains his food entirely, vomiting having ceased altogether. The symptoms of ulceration, which in this case appeared to be so marked, disappeared very rapidly under the simple treatment of purgatives.

Dr. PEASLEE asked if any member of the Society had seen or heard of any perforating ulcers of the stomach occurring in a male.

Dr. CAMPBELL stated that he had a case in a gentleman, 63 years of age, who had disease of the heart. He stated that during life the patient gave no evidence of any trouble about the stomach that would lead one to suspect ulceration. It was true he had vomiting, but it ceased after a day or two, and was of no marked character.

Dr. PEASLEE would doubt the existence of ulceration of the stomach, unless symptoms be present that could be referred directly to the

stomach; for example, the peculiar sensation after taking food—the difference in the character and severity of pain, while in the sitting or recumbent position. It is an interesting fact, that it occurs more frequently in females about the age of 30.

Gunshot Wounds of Bones of Face and Cranium.—DR. FINNELL exhibited portions of *bones of the face and cranium* from a negro woman who was murdered in 28th Street. She was shot in the left eye; the ball passing through the orbit, across the base of the brain, and lodged a little above the lobe of the right ear. The bullet is very much flattened. At the coroner's inquest he was asked whether the case was one of murder or suicide. He thought she was shot by some one else; for if she shot herself she would have to carry the pistol round to her left side. If the person was left-handed he could not see how the shot should have taken that direction, unless the pistol was held high up and in a very awkward position. Again, the pistol was found some 10 or 12 feet from where the body lay. With such a character of wound, he should hardly suppose she would have strength enough to throw the weapon that distance. She would be more apt as she fell to let the pistol simply drop.

On examining the room and fixing the furniture, he was satisfied that she was sitting at breakfast while the husband fired the pistol across the small room, (8 feet,) and as the charge went through the left eye she turned around. She did not fall upon the ground, but against the door, against and around which was blood; the spattering seemed to indicate that she leaned against it sometime, then fell down upon the floor.

Traumatic Tetanus.—DR. F. next presented an instance of *traumatic tetanus*. The specimen consisted of a *portion of the frontal bone* taken from a man who was injured by a pitchfork in a quarrel with one of his neighbors. The injury was a little above the orbital ridge. It will be seen that there is a fragment of nap in the indentation from the hat. This nap remains after a thorough maceration, so powerfully must it have been driven in. On looking on the internal surface of the bone there is a corresponding depression, and a sharp spiculum of bone that projects in upon the membranes of the brain, producing irritation there. After the infliction of the injury the man was able to go into the house, complaining of a severe pain in his head, which lasted a day or two and subsided, and nothing more was thought of it. At the end of the second week he again was afflicted with severe pain in the head, and the opening in the integument which extended down to the bone began to discharge pus. He complained of a great

deal of pain around the point of injury. At the end of the third week he began to show symptoms of tetanus, which continued ten days. The rigidity first commenced in the muscles of the neck, then in the jaw, until the symptoms were those of well-marked tetanus, from which he died.

Autopsy.—I found the opening corresponding to the depressed portion of bone through the integument. I expected to find some evidences of inflammation, but there was none going on at that point. The brain was healthy. It seemed to me that this spiculum of bone by irritation alone had produced tetanus at the end of three weeks after the injury.

DR. GRISCOM thought that it was very uncommon to have tetanus follow injury to the brain.

Aneurism of Axillary Artery—Ligature of the Subclavian Artery.
DR. J. S. THEBAUD presented a specimen of *aneurism of axillary artery* with the following history: David Butler, a colored man, aged 49 years, by occupation a chimney sweep, entered the Colored Home Hospital on the 8th January, 1858.

His health had been good until about three years ago, when he discovered a small lump in his right axilla, which he caused frequently to disappear by pressure with his hand. This continued about the same until a year ago, when it increased in size, and became painful, but did not prevent him from following his occupation until within the last six months, since which time it has increased rapidly up to the day of his admission to the hospital.

During the progress of his disease he had several times called upon a physician, who had bled him from the arm, which somewhat diminished the tumor and relieved the pain.

At the time he entered the hospital the tumor had attained an immense size, occupying the axillary region, extending over the chest to the edge of the sternum, and upwards along the clavicle, pushing the scapula backward, and crowding the shoulder upward and outward to such an extent that the top of the tumor was on a line with the upper edge of the ear.

The arm had been useless for two or three months, was more than twice the size of its fellow, and was supported outside the bed by means of a bench and pillows. The pressure of the tumor against the head of the brachium was so great as to crowd it away from the glenoid cavity. Much doubt existed as to whether the pulse could be felt at the wrist on the diseased side; nor could the pulsations of the

subclavian artery be positively determined in the usual region above the clavicle.

The tumor was uneven in shape, hard in some spots, soft in others, with an elastic fluctuating feel; a plate placed upon it was distinctly seen to rise and fall, while a sawing sound, synchronous with the heart's action, was heard on the anterior portion, inaudible anywhere else; pressure above the clavicle could not fully arrest the sounds. The pulsations of a large artery were very distinct, and seemingly superficial (over which the sawing sound was also heard) in that portion of the tumor nearest the middle of the sternum.

On the 26th January a consultation was held of the surgeons of the institution, and some of the New York Hospital were invited to join and give in their counsel, of which Drs. Buck, Van Buren, Parker, Halsted, and Markoe were kind enough to be present and render their valuable services.

The case was examined with the utmost care; opinions varied as to the nature of the tumor, between aneurism malignancy or a combination of the two, but it was unanimously resolved that an attempt should be made to ligate the subclavian artery at any point at which it might be reached; the doubt as to the practicability of the operation arising, from the deformity occasioned by the tumor crowding the shoulder and clavicle so far upwards.

The patient was put under the influence of ether, and I succeeded in tying the subclavian artery, just without the scalenus muscle; not more than an ounce or two of blood was lost.

Soon after the operation he recovered from the effects of the anæsthetic and asked for something to eat, at the same time complained of pain in the posterior part of the tumor.

He was properly nourished and stimulated, but to no effect. In 10 or 12 hours he began to sink, and died from simple exhaustion 25 hours after the operation.

The small artery which was felt on inside of tumor proves to be the sub-clavian. The artery at this point seems suddenly to expand, to lose itself, and at this point to resume its normal calibre and situation. The artery is subjected to a very sudden and abrupt expansion. The internal surface of the os brachii, scapula, ribs, and all the bones coming in contact with the tumor, are denuded of their periosteum. It can be seen how the clavicle and scapula are pushed out of their normal positions. He asked if it was common to find this sudden expansion in aneurisms.

DR. GOULEY referred to a case of aneurism of the axillary artery

presented to the Society some years ago by Dr. Isaacs; the expansion was so abrupt that he likened it in its appearance to a ball with a stick driven through it. The aneurism was not so large as in Dr. Thebaud's case.

DR. THEBAUD.—In my specimens three of the ribs are partly absorbed; there seems to be a fracture of one of the ribs, which is rather singular.

DR. FINNELL.—That would seem to point to some injury as the cause; and it might, after all, be a traumatic aneurism.

DR. THEBAUD.—The pulsation of the artery which led us astray was the sub-clavian; by those who supposed it to be a malignant tumor, it was thought that this was one of the large vessels that supplied blood to the mass; and we never had an idea that it was the sub-clavian, inasmuch as we could only trace it to a point where it seemed to dip down into the tumor. No arrest of the sounds could be effected by pressure above the clavicle, which would only be upon a part of the tumor itself.

Cancer of the Rectum.—DR. B. W. MCCREADY read the following history of a case of *cancer of the rectum*:

I was called to see Mrs. P. for the first time about two years ago. She was at that time 71 years of age, pale, presenting no marks of emaciation, and moderately active in her habits; for 5 or 6 years, according to the account which was given me, she had suffered from what was termed a chronic dysentery. There were frequent stools, consisting generally of nothing but mucus, more or less tinged with blood; together with this, there would be sometimes feculent matter of moderate consistency; she suffered a good deal from tenesmus and pain, which was referred mainly to the lower part of the rectum, though she complained sometimes of pain in the upper part of the abdomen. The appetite was good, the tongue clean, and the pulse normal; no history of an acute attack of dysentery could be obtained. To guard against the presence of retained fecal matter, mild laxatives were administered, which produced copious feculent stools, but without any decided relief to the symptoms. A rectal examination being acceded to, after some difficulty, the finger, a short distance beyond the sphincter, encountered a firm, cartilaginous ring, which readily admitted its tip; but any attempt to force seemed attended with great pain dependent from this ring; several ovoid-shaped tumors about the size of a large hazel nut hung free in the cavity of the rectum.

I was again called to Mrs. P. about six months back; during the interval a considerable change had taken place in her symptoms.

She had lost flesh and strength; the skin had assumed a straw-colored tinge, and the appetite was impaired. She told me that for some time back she had passed both flatus and she believed feculent matter from the vagina. On examination, the neck of the uterus was readily found, but the os appeared to be carried backward and lost in the recto-vaginal septum; no communication between the rectum and vagina was discovered, but there was ample evidence of the presence of feculent matter in the vagina. The examination, owing to the reluctance of the patient, was hasty and incomplete, and no rectal examination would be submitted to. Mrs P. died, exhausted, on Tuesday, March 2nd.

On post-mortem examination, the abdomen alone was opened. The peritoneum presented marks of recent inflammation; the liver not much enlarged; showed numerous cancerous tubera; some of these, when cut into, proved diffuent. The rectum terminated at it; lower part terminated in a kind of cloaca, including the upper part of the vagina, the walls of which were formed by the thickened tissues of the surrounding parts. They were of a dirty slate color, presenting no trace of the original texture of the parts. In the anterior wall, and on its level, was seen the os uteri. The stricture had entirely disappeared. On microscopical examination, no cancerous elements were discovered in the walls of the cavity; they consisted mainly of fibrous tissue, with some of the muscular elements of the intestinal wall.

DR. PEASLEE thought this a singular termination of schirrus of the rectum, though he could not believe there should be any doubt as to its schirrous character.

DR. MCCREADY asked Dr. Clark if he knew of any case where cancer destroyed itself?

DR. CLARK referred to what is called corroding ulcer of the uterus, which, by some, is regarded as cancerous, in which all the diseased mass is ulcerated away; he thought this to be a similar case, in which the cancerous mass had destroyed itself by ulceration, but developed it secondarily, as was seen by the condition of the liver.

DR. SANDS, in answering a question from Dr. Peaslee, stated that he had examined the walls of the gut for evidences of cancer, but discovered none; there was only some hypertrophy of the muscular coat of the intestine. Examining the liver, he found abundant evidences of cancer. The cells were very well characterized, especially where they had existed for a time.

DR. MCCREADY.—Some of the deposits in the liver were entirely fluid. On introducing my finger into the rectum, there could be felt a firm ring, and by pressing against it with a little firmness I caused

the patient to shriek with pain, and I had to desist; at that time defecation was attended with intense pain. After a while, it was passed without any particular distress being caused, while cancerous cachexia was developing itself in the general system. It is one of those cases where it is necessary to bring to bear all the methods of diagnosis at our command. It had been put down as an ordinary case of chronic dysentery.

Regular Meeting, March 24th, 1858.

Fibroid Tumor of Brain—Convulsions. DR. T. G. THOMAS exhibited an instance of *fibroid tumor between the anterior lobes of the brain*. Ann Lusticiá, æt. 42 years, England. Her history is unknown up to four months ago, when she was admitted to the Work House. Since here, has been subject to convulsions, supposed to be epileptic, and has had three previous to her last attack. These would last for fifteen or twenty minutes, after which she would remain dull and stupid for twenty-four hours or longer.

Monday, 15th inst., about 3 o'clock, P.M., while sitting, reading a letter, she was seized with a convulsion and fell from her seat. She was placed in bed, and in fifteen or twenty minutes seemed to rally from the attack, but was immediately seized again with convulsions; these continued at intervals of fifteen or twenty minutes for twelve hours, when death ended her sufferings. The symptoms at first indicated epileptic convulsions, but soon evidences of compression of the brain showed themselves. The pupils became dilated, fixed, and insensible to light. The breathing stertorous; the lower extremities paralyzed; and the urine and fæces were passed involuntarily. The pulse was feeble and intermittent.

Wet cups to chest and back of neck were used, without giving any relief.

Post-mortem twelve hours after death. On removing the calvarium the membranes of the brain appeared congested. The dura mater being pierced, about eight oz. of serum poured out. In the right hemisphere anterior lobe was found the tumor, about the size of an egg, and round as seen in the specimen, between the dura mater and arachnoid, and was attached to the bony excrescences of the calvarium, and adhered to the dura mater. The lungs were normal, as also the heart, liver, &c.

Synovitis of Knee—Amputation of Thigh—Death. DR. T. C. FINNELL presented a specimen of *disease of knee-joint implicating the bones—amputation of thigh—death*. The patient, a young man æt. 19, two years since injured the knee-joint. Synovitis followed, which terminated in suppuration of the joint. When seen by Dr. Finnell, he

was very much reduced. A consultation was held and removal of the limb advised. This was done, and everything went on well until within the last two weeks, when the discharge increased in quantity, and he sank and died.

On inspection, the heads of the femur, tibia and patella are seen to be eroded. The joint was destroyed by the abundance of pus in the surrounding parts. The patient had no evidences of lung disease.

Perforating Ulcer of Stomach. DR. FINNELL then presented an instance of *perforating ulcer of the stomach*, occurring in a young woman 18 years of age. For the last eighteen months she complained of pain in the stomach and abdomen, but still was able to attend to her duties as servant, until four months since, when, her strength failing, she was obliged to leave off work. Returning home to her friends, she was still able to be about, complaining of general weakness and severe palpitation. She continued in this way until two days ago, when she was suddenly seized with a severe pain in the abdomen and head. She gradually became comatose and died.

Autopsy this afternoon. Body not much emaciated. The skin was of a peculiar light yellow color. On laying open the abdomen, the stomach was found in a puckered condition at its lesser curvature, where was situated a perforating ulcer—adhesions having taken place between that part of the stomach and liver, thereby preventing general peritonitis.

Wound of Right Ventricle. DR. HUTCHINSON exhibited a specimen illustrating *wound of the right ventricle*. The man from whom this was taken received a wound from some sharp instrument, this day week. The external wound was situated two inches within the left nipple, within about half an inch of the sternum, passing downwards, backwards, and inwards towards the sternum. He ran out of the house in which he was stabbed, some fifteen paces, fell and expired after the lapse of *twenty minutes*.

The *post-mortem* was made by Dr. Geo. Cochran, to whom he was indebted for the specimen. The pericardium was filled with semi-coagulated venous blood.

DR. DALTON observed, that twenty minutes is a long time to live after the reception of such a wound. It occurred to him whether such a wound in the left ventricle would not be followed more speedily by death, than in left side. He believes that there are no instances of aneurism of the ascending arch bursting into the pericardium, that death does not occur instantaneously. In both cases it seems to be owing to the arrest of the heart's action. The delay in this case seem-

ed to him remarkable, and he asked if any of the members had seen a similar case.

DR. HUTCHINSON referred to a paper upon this subject, published some time ago by Dr. Purple, in which death in some of the cases related was even longer delayed. In one case it was six or seven years, caused by a shot in the right ventricle.

DR. DALTON.—In these remarkable cases, was there a free opening between the cavity of heart and pericardium?

DR. HUTCHINSON.—In one case the wound cicatrized, and the patient died of some other disease.

DR. DALTON.—That may be the case when the wound is oblique, by which means a valve is formed, which closes up the opening completely. He noticed this in the lower animal quite often, where a wound five-eighths of an inch long was going to be closed up in that way.

DR. THOMAS referred to a case that came under his observation six years ago, in Charleston. Two young negroes got into a difficulty—one stabbed the other in the chest. The man who was struck said he was killed, and sat down in a chair, afterwards he walked a quarter of a mile before he dropped down dead. The direction of the wound was oblique.

DR. DALTON.—Was the wound sufficiently oblique to account for the delay?

DR. THOMAS.—The physician accounted for it in that way. He recollects a case that was presented to the Society by Dr. Van Buren some time ago. A man in New York Hospital received a wound in the heart from a bayonet, and lived nearly a week after. He died suddenly.

DR. DALTON believed in that case the wound could not have passed entirely through the ventricle, but only through about two-thirds or three-fourths of its substance, and that afterwards the remaining part gave way.

DR. HUTCHINSON.—In the paper to which I referred, it is said that the wounds of the left side of heart are less speedily fatal than those on the right—owing doubtless to a peculiar arrangement of the muscular fibres of that side.

DR. PEASLEE.—It seems to me that there are two or three elements to be taken into account. In the first place, if the artery is ruptured at the commencement of the ascending aorta, the blood there is poured through an opening which has no contracting power. At every contraction of the left ventricle the blood will be very sure to find its way through the opening. If of any considerable size, it must very

soon fill it up; but if the wound is oblique, as Dr. Dalton suggested, the very contraction of ventricle might close up the wound. It seems to him this might be the case, even if not oblique. The force of contraction might be sufficient to close it. On the right ventricle the case is different; in fact, sometimes we can hardly tell whether the wound is oblique or not, the walls are so thin. This question is certainly of very great importance in connection with the murder of Dr. Burdell. According to some, it was considered impossible that he should with a wound of the heart have arisen and walked to the door, although there were evidences of this fact in the spots of blood upon the floor, against the door, and on the ceiling. This is one of the facts that would go to show that it was possible.

Tubular Pregnancy.—DR. HUTCHINSON next exhibited a case of *tubular pregnancy*. It occurred in a female 30 years old. She was the mother of three children. At 5 o'clock the other afternoon, she was taken with fainting spells; she supposed herself three months pregnant, and was seen by a physician soon afterwards, who found her vomiting, &c. She remained in a fainting condition during the night, and was in that state at 8 o'clock in the morning, when he saw her. She had a blanched appearance; her extremities were cold, and there could be felt no pulsation at the wrist. Did not complain of any pain, though towards the last there was some tenderness of the lower portion of the abdomen. She died soon after.

Autopsy eight hours after death. We supposed she had died from hæmorrhage following rupture of the right fallopian tube. We could not refer it to any other cause. We found, on laying open the abdomen, a quart of blood in the cavity of the peritoneum, and a rupture of the right fallopian tube at about its middle portion. It can be seen enlarged considerably at the place where the fœtus was situated. The cord was hanging through the opening into the fallopian tube, and also the umbilical vesicle. A corpus luteum in right ovary is very distinctly marked.

DR. FINNELL presented a somewhat similar case to the Society some time ago, removed from a prostitute. It was situated in right fallopian tube, also. She died of internal hæmorrhage. The amount of blood effused was very great; the whole abdominal cavity seemed to be filled with it. The fœtus was enclosed in a large sac; the amniotic fluid was as clear as water. The fœtus was a little larger than the one here presented. She was said to have been delivered of a child at full term; if this were true, there would have been double pregnancy—one in uterus and one in the fallopian tube.

Abortion Hydatids. DR. JOHNSTON presented portions of the product of abortion. The lady from whom this was taken, aged thirty-five, had two children living, between whom she had a miscarriage about three and a half years ago. On the first of January last, she supposed herself three months gone. After attempting to lift a sick friend she was seized with floodings; this was soon checked. She, however, about two weeks after felt life very evidently, and for three weeks after was free from flooding, until about two or three weeks ago, when hæmorrhage recurred. Since then she has passed blood several times. Notwithstanding all this she said she felt life, and it was hoped that she would get through. On the morning of 23rd Dr. J. was called about four o'clock. The patient had suffered pain all night, and was bleeding pretty freely. By the time he reached the bedside flooding had ceased; pain was intense—pulse, 120. Her skin was warm, and she seemed to feel strong, but she had lost a great deal of blood. The pain in the abdomen and loins was so intense that he could not make an examination. About eight o'clock this mass came away. He found it to be hydatids, about a pint and a half in quantity. He presented the specimen in order to ask if this state of things could not be diagnosticated at an early stage, and thus save a vast amount of trouble and annoyance.

DR. FINNELL remarked that he had made an autopsy of a lady whose history was somewhat the same as in this case. She supposed herself pregnant about three and a half or four months. Flooding came on after exertion. It was very profuse and alarming. Several medical men were in attendance, waiting for the expulsion of the child; a large amount of hydatids made their appearance. These were not suspected to exist up to the moment of delivery. She died a week after, with pneumonia.

DR. SABINE asked Dr. J. if there were any frequent gushings of water. He had two cases of that sort in which this symptom occurred. He believed this to be one of the symptoms.

DR. JOHNSTON.—The only gushes she had were pure blood.

DR. PEASLEE thought it a point of some interest, whether such a production is to be regarded as a product of conception.

DR. CLARK did not have much doubt about it. He thinks it pretty fairly settled in the affirmative, inasmuch as it can be formed of nothing but the chorion, and the chorion can be formed of nothing but the foetus.

Cancer of Spine. DR. H. B. SANDS exhibited an instance of *encephaloid disease* of the spine. The particulars of this history are some-

what incomplete, but are as follows: This patient sprained his back in attempting to lift a heavy piece of timber in June last; the only evil consequences at the time was the passage of bloody urine, and a certain amount of lameness. He continued to work, occasionally suffering pain, until December last, when he was obliged to leave off work. Two physicians were at that time called to see him, and found him suffering from acute meningitis of the cord. He was prescribed for accordingly, and the disease abated in severity, but still he was unable to resume his occupation, and he remained confined to his room until two weeks ago, when, in attempting to go to the water closet, he was seized somewhat suddenly with paraplegia. Previous to this time he had no paralysis, but a severe pain in the lower extremities. He remained paraplegic until his death, which was a consequence of exhaustion.

Autopsy.—The portion of spinal cord two inches above, and including the cauda equina, was shown.

There was nothing abnormal except a very beautiful vascularity of the parts. Within the theca was a very large accumulation of serum, which distended the canal and made pressure upon the cord. The bony walls presented a marked appearance of disease; the disease being confined to the sacrum and lumbar vertebræ—most marked in the former. The bones were softened, yielding to the pressure of the finger nail; the softening affected the bodies; they were porous, and infiltrated with a fluid looking like the mixture of blood and pus, but under the microscope no pus was discovered, but cells mostly round, 1-1000 or 1-1500 of an inch in diameter, each having a nucleus from 1-4000 to 2-5100 of an inch in diameter. Besides, there were free nuclei that looked very much like globules of pus, but they did not dissolve on addition of acetic acid. The microscopic appearances agree with those noticed in encephaloid disease at this point. There was also fungous growth in duodenum, colon, and also at neck of the bladder. What makes it probable that the disease was malignant in spinal cord was that the appearances of the growths elsewhere had the same characteristics. The kidneys were not known to be diseased—they furnish very pretty specimens of granular degeneration. The left is very large and right very small. The microscopic appearances are those usually met with in Bright's disease.

Fatty Degeneration of the Heart.—DR. E. R. PEASLEE presented a case of *fatty degeneration of the heart*. The patient, a cook, æt. 40, was attacked very suddenly last Friday morning, and he was sent for in great haste. She had intense pain in the epigastric region, and in

the abdomen generally; had vomited several times, and had a few discharges of a watery character. On examining the contents of the stomach large masses of meat were discovered. She had been eating a large quantity of fresh pork, which she remarked always was accompanied with unpleasant effects. It seemed to be merely irritation of stomach from the presence of this food. She had no tenderness on pressure. Her pulse was rather weak and slow, which he attributed to the intense paroxysms of pain. He directed 10 drops of laudanum to be given, and fomentations to the abdomen until the pain should go off. He also ordered a powder of rhubarb and perchloride of mercury for the pain, and expected to see her well in the course of a couple of hours. He was again sent for two hours afterward, when they said she was dying. She died at 1 o'clock.

Autopsy.—He suspected arsenic in the stomach. No cause of death was found, however, except as seen in this heart. The heart appears to be perfectly well to the naked eye, but examined by microscope is exceedingly fatty. The stomach was congested, and contained about an ounce of blood. The case is interesting in relation to the sudden death and its cause.

EDITORIAL AND MISCELLANEOUS.

— The season has again arrived for the opening of the Winter session in the Medical Colleges throughout the country. In this city the lectures have already begun, by the preliminary courses which usually precede, by a month, the regular course. The season, too, has arrived for the student to determine, if he has not already done so, where he will seek his medical training. The settlement of this question is important to him, and it is well for him to deliberate upon it, seeking that locality where he can receive the kind of instruction which is best calculated to fit him for the active duties of his profession.

The difference between one locality and another consists not so much in the academical training, as in the advantages of clinical instruction, and that school is undoubtedly the best which offers a combination of the two.

It becomes us, then, at this time to show to those who are about entering upon their studies, or are on the eve of completing them, the

great superiority which the schools of New York enjoy in both these respects. This we cannot do in a better and more conclusive manner than by enumerating the various resources for a complete medical education which the student has here at his command.

The medical institutions of New York for educational purposes may be classified as follows: Colleges, private instructors, hospitals, college clinics and dispensaries.

There are three medical schools, each presided over by gentlemen of deserved reputation, and holding positions earned by talent and industry. Each college has its faculty, rich in the means of imparting a thorough education, experienced in teaching, and vying with each other in offering every facility to the student for pursuing his studies under the most advantageous circumstances. The museums and the dissecting rooms in all deserve especial commendation, while the unfailing sources from which the latter are supplied allow an indulgence in anatomical pursuits, without fear of a scarcity of material. The large, airy, well-lighted, well-ventilated and well-furnished anatomical rooms, divested of any of the revolting accessories which usually cling to such places, suggest to the student's mind a proper observance of the humanities of life, while investigating on the human body the causes of death.

There are quite a number of physicians who receive private students, but of those who are known to devote especial attention to office instruction we may mention Dr. Aylett, who has always been fortunate in having a large class, and who, as a private instructor, has established a high reputation; Dr. Conant, who as Demonstrator of Anatomy at the New York Medical College, and Surgeon to Demilt Dispensary, has had ample experience in public and private teaching; and Dr. Edwards, Clinical Assistant at the College of Physicians and Surgeons.

There are several preparatory schools of medicine, in which students are examined daily upon the lectures of the different schools. The teachers in these schools also give clinical instruction.

Drs. Budd, Bronson and Aigner constitute one of these schools; Drs. Thomas and Donaghe another, and Drs. Sands and Draper still another.

Dr. Bronson is House Physician, and Drs. Thomas, Donaghe and Draper are Attending Physicians to Demilt Dispensary. Dr. Sands is Demonstrator of Anatomy to one of the Colleges; Dr. Aigner, physician to N. Y. Dispensary, and Dr. Budd, District Physician to the Lying-in Asylum.

The positions which all these gentlemen occupy as physicians to some

of our best charities, afford them an abundance of material to give clinical instruction in connection with their office instruction.

Drs. Gouley and Draper, both excellent microscopists, give instruction in this special branch of medical study. Dr. Gouley is microscopist to Bellevue Hospital, and Dr. Draper to the N. Y. Hospital.

The hospitals of New York furnish most undoubted clinical advantages.

During 1857 there were nearly 3,000 inmates of New York Hospital. Two-thirds of these were surgical cases. Gunshot wounds, fractures, dislocations, and such injuries can be studied in the wards of this hospital to great advantage. There is a fine amphitheatre connected with this institution, where all operations are performed, affording ample accommodation to a large class of students. The public visits to the surgical wards are made four times a week, and to the medical wards twice a week.

The admissions to Bellevue Hospital during 1857 reached nearly to 8,000. From the very fact that the number is so large, the variety of cases is greater, and its character as a general hospital renders the number of cases in the medical and surgical wards more nearly equal. There is a pathological museum and a large lecture room and operating amphitheatre attached to this hospital. During the winter, clinical lectures are delivered every day at noon, by the members of the Medical Board; and every effort is made by them to render this hospital a valuable school of clinical instruction.

The ease with which both the New York and Bellevue Hospitals can be reached—the first being on Broadway, near the Park, and the latter in the immediate vicinity of the medical schools—is another additional inducement to the student to be prompt and regular in his attendance upon these hospitals.

The Charities which are situated upon Blackwell's, Randall's, and Ward's Islands, with their large number of invalid occupants, are open to the student on certain stated days.

On Blackwell's Island is the Island Hospital, the Small Pox Hospital, and Lunatic Asylum. The first two are under the care of Dr. W. W. Sanger, assisted by a corps of young physicians. In the Island Hospital can be seen all the phases which syphilis assumes, over one-third of the 3,158 patients admitted during the year 1857 presenting some form of this disease.

At the Lunatic Asylum, which is under the medical charge of Dr. M. H. Ranney, the 900 patients—the number treated during the last

twelve months—afford a great opportunity to study the different manifestations of mental and nervous diseases.

At the Nursery Hospital, on Randall's Island, under the care of Dr. Whittlesey, there were, in 1857, 1,500 little patients afflicted with the class of diseases common to children. This hospital, and the Child's Hospital and Nursery in the city, permit a study of disease in the young patient which is rarely obtained in this country.

The immense immigration to this country, naturally seeking this city as the port of entry, throws a large number of this class into the Emigrant's Hospitals, under the Commissioners of Emigration. These are situated mostly on Ward's Island, and in years of large immigration the number is proportionally large. We have no report by us later than 1854, when the Medical Board reported a total of 29,667 cases—13,806 in the Refuge Department, and 15,861 in the hospital proper; 4,500 of the latter number were in the surgical wards—the remainder in the medical wards. Since then, the number has diminished somewhat with the diminution of immigration, yet the sum total remains very large.

There are several other hospitals, whose reports we have not at hand, and therefore can give no positive data of the total yearly number of their inmates. They would greatly increase the number of our native and foreign population that seek medical advice in our public charities. We mention the names of some of them, more to indicate their existence than to designate them as institutions affording clinical instruction to students: St. Luke's, St. Vincent's, the Jew's Hospital, Colored Home, &c., are among the number.

In addition to the hospitals, are the clinics at the colleges, the dispensaries and infirmaries. Each college gives medical advice through their clinics to at least 2,000 patients yearly. Upon clinical days lectures are delivered by the clinical professors upon the cases which are present.

New York has five dispensaries, and two eye and ear infirmaries, collectively distributing medical advice and dispensing medicine to more than 150,000 patients annually.

In three of the dispensaries clinics are held; by Dr. Cammann at the Demilt and Northern, and by Dr. Corson at the New York—both on diseases of the throat and chest—and by Dr. Briddon, on Surgery, at the New York. These dispensaries are the largest, and together report over 100,000 patients.

At both of the Eye and Ear Infirmaries clinics are held during the winter. Drs. Stephenson and Garrish lecture on diseases of the eye

at the N. Y. Ophthalmic Hospital, fall and spring; and Dr. Agnew, in the spring, on the same subject at the N. Y. Eye Infirmary.

The latter institution presents, in its new building, superior advantages for clinical instruction. There is an operating amphitheatre capable of accommodating 150 students, and the number of patients is large. The report for last year shows a total of 3,216 treated for diseases of the eye, and 250 for diseases of the ear. The number treated at the Ophthalmic Hospital was 1,200.

The charities already enumerated will suffice to show the great resources of New York for clinical instruction. With teachers on every side, and this abundance of material at their command, we are safe in saying that New York is superior to every American city in its clinical advantages.

— A suit has been commenced, as we understand, by Dr. Morton, who claims to have discovered that sulphuric ether is an anæsthetic, against Dr. Charles A. Davis, the physician to the U. S. Marine Hospital at Chelsea, Mass. It is for an infringement of his *patent* for the use of ether, the damages being laid at 5,000 dollars; and although we do not believe the patent can be sustained, Dr. Davis must be put at a large expense to defend the suit. To say nothing of such a course, it is scarcely in good taste for Morton to enter upon it at the same time that he is whining around the profession in New York, and begging for their money and influence to enable him to make up a sum of *ten thousand* dollars for his pocket. Query, why should Morton select as the one to be sued, Dr. Davis, a gentleman who is making his own way without the assistance of wealth, passing by the Warrens, the Bigelows, and the other rich physicians of Boston? Does he intend to sue every surgeon who has used ether, or does he intend to pick up a little black mail from the poorer ones only? We trust the gentlemen of this city, who have been persuaded into an endorsement of Morton, may have their eyes opened as to the real character of the man and his purposes. Has he engaged not to *sue* them?

— The importation of pharmaceutical preparations from Paris seems to become more common and frequent, and if they continue to be received with favor, will doubtless be still more extensive. There are several reasons why they should be valued by us, not the least of which is the fact that the rules governing the dispensing of drugs are much more rigorous and much better enforced in France than in this country, and we suppose every one will admit that no branch of trade requires so constant a supervision as that carried on in drugs. The

impossibility of otherwise securing purity in them seems to be generally acknowledged. Our thoughts have been carried in this direction by receiving a sample of Bugeaud's "toni-nutritive wine," imported by Ward & Simonin, of this city. This is a pharmaceutical combination of malaga wine, peruvian bark and cacao. The latter drug is daily attracting more attention as a tonic and adjuvant in the general nutrition of the system, and can therefore be beneficially associated with the peruvian bark and wine. This, too, is the only reliable preparation of it in market with which we are acquainted. As combined in this preparation the whole is agreeable to the taste, and can be readily administered to the most fastidious. It would be well adapted for the use of those who find themselves suffering from the effects of exposure to the malarious influences of different regions, and are annoyed by the languor and lack of spirits which they often induce when not sufficiently potent to break forth in a more open manner. It is worthy of note that the "toni-nutritive wine" has been commended by the Section on *Materia Medica* of the N. Y. Academy of Medicine.

— Our constant readers will remember an interesting paper upon Chloroform by Dr. Squibb, published in the MONTHLY more than a year ago, in which the purity of different samples was spoken of at length. Among the few that indured the test to which they were submitted was that of Messrs. Duncan, Flockhart & Co., of Edinburgh, and this is, in fact, the only one from a source sufficient to supply an extensive call for it. Before Dr. Squibb's report, and since, we have used this chloroform with every satisfaction, and are convinced that the profession generally would be pleased with the change if they allowed it to take the place of the impurer varieties. It should be borne in mind that it is the impurities which give rise to the dangers in the use of chloroform, or at any rate, to most of them, and therefore a slight increase in the cost of the anæsthetic can be no excuse for not employing it. Messrs. Shedden & Neergaard, of this city, deserve the thanks of the profession for their endeavors to keep constantly on hand a good supply of this chloroform. We urge upon all a careful trial of it, and especially those who still cling to the more disagreeable and irritating sulphuric ether. The only excuse for employing this latter agent, its alleged greater safety, would, we believe, be entirely done away with by using the chloroform of this manufacturer.

— At Binghamton, in this state, on the 24th of September, the corner stone of an institution, so far as we know unique in its purpose, viz., the care and cure of inebriates, was laid with the usual ceremonies. A large collection of people was drawn together, and several distin-

guished men were among them. Of the addresses we have only seen that of Dr Bellows, the distinguished Unitarian clergyman, which was repeated in New York on the following Sunday, for the report of which we are indebted to the *Daily Times*.

One or two of the passages are worthy of note here, as containing the kernel of the whole matter, and probably indicating the views of its managers.

“What then is the original but ripe principle which this Institution embodies—the new, yet popular policy which it inaugurates? Let us not, by confounding it with other good things of similar association, diminish the distinctness by magnifying the size of our idea, or, by seizing claims on the pre-occupied grounds of other great and kindred interests and policies, forsake the impregnable fortress of its own limited but independent claims to originality. Interest in the intemperate, thank God, it did not remain for us to arouse. The evil of drunkenness, the perils attending the use of alcoholic stimulants have awakened the conscience, alarmed the fears, animated the moral efforts, engaged the devoted and continuous labors of our whole people for a quarter of a century.

“Our country, for thirty years past, has been giving, in almost every possible form, the liveliest testimonies to its sense of the vast extent, the terrible ravages, the social and civil calamities, the moral and spiritual evils of intemperance. By legislative enactments and popular associations, through political parties and philanthropic appeals—by a machinery of inconceivable magnitude, universality, activity and zeal—by the erection of what may be considered a new social code—by the banding together of the clergy of the country as one man in proclamation, denunciation and warning of the evil—by private pledges and by Main Law agitation, the people of this country, in its whole moral and religious portion—the people of this state, in its weighty and dignified majority, have given emphatic, continuous, united testimony, in forms that can never again be equalled, because never again required, let us hope, to the public sense of the evils of intemperance. The temperance associations, of every name and order, may be considered as having left nothing to be done, in the way of public expression, respecting the sway and the malignity of the vice of drunkenness. This Institution assumes the existence of this evil, and takes for granted that all are agreed (whatever their dalliance with it may be) in acknowledging its extent and enormity. It recognizes the vast importance, and blesses the precious influence of all the means employed in preventing, suppressing and extinguishing it. It does not claim to be able to take place of any of those preventive or curative processes; it has no discouragement for them, no jealousy, no rivalry with them; on the contrary, nothing but the warmest encouragement, the heartiest sympathy, the liveliest and most friendly emulation.

“But—and herein is the peculiarity—it declares it to be the opinion of the thoughtful, observing and philanthropic men of the state, that a very important percentage of the intemperance of the world, the

country and the state is beyond the reach of any or all the means now employed to prevent, remedy or restrain it; that it owes its existence to constitutional causes, is perpetuated by morbid necessities, and propagated by philosophical laws—which are wholly beyond the reach of moral suasion, political restraint or private control; in short, that inebriety, to an extent sufficient to create an unspeakable sum of personal and domestic misery, of social injury and public crime, is a disease either produced by intemperance, and then perpetuating it, or producing intemperance and then continuing it—a *disease* which requires in the name of public policy, and demands in the name of Christian charity, medical treatment and a hospital; a disease so peculiar, obstinate and distinct, so common, deplorable and injurious, that it demands a hospital *exclusively devoted* to its observation, control and treatment. Between intemperance, a condition of body and mind resulting from excess in the indulgence of natural, the abuse of festive habits, from recklessness of principle, the love of evil company, fondness for pleasure and excitement, and impatience of trouble, care and sorrow, the ordinary and prevailing intemperance of society—intemperance, the exceptional, occasional or frequent vice of those still held responsible for their conduct, capable of self-control, open to argument, to motives and to reform—between intemperance thus known and described, and inebriety—intemperance still, but now a disease, original or superinduced, caused by or causing drunkenness, a disease native to the constitution, or created within it by abuse, a disease because an organic or functional derangement of the system, which bears drunkenness as its necessary flower, as naturally as the ivy root bears poisonous leaves. All the intemperance which arises from disease, they propose, for convenience of moral nomenclature, to name *inebriety*. And inebriety thus pronounced a disease they propose uniformly to treat as a disease, in an asylum. The merely intemperate they pitifully and sadly leave, in all the vast and wretched company they constitute, to the watch and care of the moralists, to the ordinary civil and moral police of society, to the guardianship of parents, the warnings of religious guides, the efforts of the temperance associations, and all the various alliances for their rescue from the powers of temptation and from the fate predicted and procured by their reckless ways and thoughtless minds and callous hearts. They know the inadequacy of these defences and protections; but they know the insufficiency of all efforts to wholly control a vice whose roots are so deeply planted in the moral infirmities, the social ignorance, the imperfect moral and spiritual condition of our race—a vice which civilization, by developing means and opportunities for its indulgence faster than it develops moral apparatus for its control, makes the chief source of the crimes of society without allowing us to hope, for a long time to come, for anything more than a steady, but slow decline in its sway. But *inebriety*, wholly inaccessible to the influences which warn, or protect, or save intemperance—inebriety, a disease—not of the will, or the heart, or the conscience, but of the stomach, the brain and the intestines—a physical, not a moral disease—they propose to take out of the hands of the

teachers, the moralists, and the law, and put into the hands of the doctors—of doctors especially trained to treat it, and with special means and opportunities of treating it; chief of which is the power to restrain and to confine it, for such a term as its due treatment may require.”

In reference to the numbers of subscribers, or stockholders, as they are termed, it is worthy of note, that of lawyers there are *four hundred* out of a total as given by the last state census of 4,542; of clergymen *four hundred* out of a total of 4,810, and of physicians *eight hundred* out of a total of 6,010. This would seem to intimate a hope on the part of medical men that it may be possible to gather into such an institution many, if not all, of these cases of habitual drunkenness which are now recognized as arising from disease. Oinomania requires medical treatment as much as suicidal mania, or any other monomania, but it is impossible to conceal the fact that there must be far greater difficulties in consigning its subjects to an asylum. The danger of improper interference with the liberties of individuals under the charge of some other forms of insanity are pretty distinctly recognized, but the difficulties are as nothing when compared with the obscurities in discriminating a case of dipsomania, or deciding when a person is so far inebriated as to justify a permanent or temporary confinement. The whole thing is an experiment which is worthy of being carefully tried, but too sanguine success in its result is not wise, as it may be followed by disappointment.

— At the sitting of the Academy of Medicine, held in Paris, July 20, 1858, M. Trousseau, in the name of a commission, constituted of M. M. Begin, Bouley, Jobert, Larrey, Renault, and himself, read a report upon the different papers upon the Ligature of the Œsophagus, communicated to the Academy since July 29, 1856.

The problem, said M. Trousseau, comprehends a question of fact and a question of interpretation. He would examine both, commencing with the more important, that of fact. What are the phenomena supervening upon the ligature of the œsophagus? Is it true, as advanced by Orfila, that this operation is so simple, and has so little reaction upon the system, that the subjects submitted to it remain unaffected by it, and that its hardly appreciable effects can be neglected without inconvenience in toxicological experiments?

Is it true, on the other hand, as sustained by M. M. Bouley and Reynal, that the ligature of the œsophagus is followed by very manifest functional disorders, which should be estimated in studying the effects of substances introduced into the stomach of animals, upon whom the œsophagus has been ligatured?

As the result of several experiments performed before the committee, and a full examination of the whole subject, M. Trousseau ends his report with the following conclusions:

1st.—The application of a constricting band upon the œsophageal tube is followed almost uniformly by special symptoms, which, whatever may be their cause, are of a character so serious that they should be taken into account in toxicological studies.

2d.—These symptoms are more or less decided as the constriction is more or less tightly drawn.

3d.—Permanent constriction of the œsophagus is fatal in nine cases out of ten.

4th.—The maximum duration of life having been six days, in the subjects of experiment forming the base of this report, it follows that the supposed toxical properties of substances experimented with while the œsophagus was ligatured may be doubted, whenever death does not follow until the 2d, 3d, 4th, 5th, or 6th day of their ingestion, and for a much stronger reason whenever this period is exceeded.

5th.—The symptoms characteristic of a permanent ligature of the œsophagus are those of profound depression, the period of the first twenty-four hours being once passed.

6th.—The lesions following permanent constriction of the œsophagus consist, generally, in inflammation of the nerves which accompany the œsophagus; inflammation with or without the generation of pus in the region where the traumatic action is established; whence this rigorous conclusion, that every toxicological experiment in which this complication intervenes should be annulled as tainted with legitimate suspicion, in view of the impossibility of determining whether in similar cases the fatal accidents result from the substances experimented with, or from inflammation of the nerves of the neck.

7th.—The temporary ligature of the œsophagus is fatal in only 3 7/8 cent. of the cases, according to the statistics furnished by this report.

8th.—As a general rule, the effects are less serious according as the application of the ligature is less prolonged; whence this consequence, that, in order to simplify as much as possible the toxicological experiments, it is necessary to have the constricting band applied the least possible length of time, taking care to tighten it only to the degree required to prevent the return of articles ingested, but without involving the walls of the œsophagus.

The duration of the application of the band should not exceed six hours, a period in which the substances injected are no longer in the stomach, or have produced there all the effect they can determine.

9th.—Prolonged and closely tightened ligature of the œsophagus can, by reason of the disorders it produces and the fatal accidents following it, make the existence of poisonous properties suspected in substances entirely harmless.

10th.—The ligature of the œsophagus being liable, in exceptional cases, to prove fatal, even in the first hours following its application, one should always be aware of this casualty in performing toxicological experiments, and assure himself, by a careful examination of the nerves of the neck and the respiratory organs, that no lesion intervenes capable of complicating the phenomena; since, in fact, all the causes of death after ligature are not known, conclusions should not be drawn until after repeating the experiments, with the precautions just indicated, and especially without practising the ligature as Orfila did, and as he recommended it to be done, (4th edi., p. 29;) one should have obtained constantly identical results.

The final conclusion of this report is, that M. M. Bouley and Reynal have done well in calling the attention of experimenters anew to the subject of ligature of the œsophagus—an operation often indispensable to toxicological experiments, but of which it was wrong to exaggerate the harmlessness.—*Gazette Hebdom.*

“*Universal Douche.*”—Dr. A. M. Adams, upon a late visit to the Continent, speaks of an ingenious bath, devised by Dr. Molewater, of the Rotterdam Hospital, and terms it the “Universal Douche.” The patient stands in a hollow niche in the wall, and parallel with his spine rises a central tube perforated with many apertures; while this tube is crossed at right angles by upwards of a dozen semi-circular tubes, similarly perforated, having thin concave surfaces towards the bather. A powerful stream of water is then turned on, and from all these perforated tubes, as well as from others below, the patient is enveloped in a perfect whirlpool of water, which lashes against his body in every direction. This form of bath is found to possess immense tonic influence in various atonic and hysterical complaints.—[*Edinburgh Med. Journ.*

—Dr. JAMES B. McCaw, one of the editors of the *Virginia Medical Journal*, has been elected Prof. of Chemistry in the Medical College of Virginia, that chair having been vacated by the resignation of Prof. Martin B. Scott.—*Boston Med. and Surg. Journal.*

Quinine in Scarlet Fever.—Dr. E. A. Morrison, of Lawrenceville, Brunswick Co., Va., has an article in the *Virginia Medical Journal*, in which he extols this new method of treatment. He has treated this disease repeatedly in epidemic form, for more than thirty-five years, and thinks he has met with the greatest success from the powers of quinine. He relates several cases where it had the happiest effects, though the disease presented itself in a very malignant form.

He treated about twenty cases in one family, and all recovered but one, to which he was called at the last moment.

When the first symptoms make their appearance he orders quinine, regulating the dose according to the age, and continuing every two or three hours until under its influence, occasionally giving a few grains of blue mass, to gently relieve the bowels, and mopping the throat with a strong solution of the nitrate of silver. He also, when the patient is old enough, directs a gargle of red pepper tea and common salt.—*Med. and Surg. Reporter.*

Pepsine in the Obstinate Vomiting of Pregnancy.—The *B. and F. Med. Chir. Rev.* copies from the *Bullet. Gen. de Thérapeutique* an article by Dr. L. Gros, in which he relates the remarkable effects of pepsine in these vomitings. In several cases every method of treatment had failed, and he even thought of abortion as the only chance for the woman's life. He gave about one scruple in two doses, to be taken daily, in broth. This being retained from the first, it was continued, and gradually more powerful nourishment was given. At the end of three weeks the case was complete, and from that time all went on well. This was a sample of all his cases. He explains it, "by supposing that, although in the first instance the vomiting is due only to the sympathy existing between the uterus and the stomach, yet subsequently the stomach itself becomes affected, and is proved by the fact that in the beginning of pregnancy the vomiting occurs only in the morning or evening; but in aggravated cases it supervenes after every meal, and all alimentary matters are rejected. In such cases, therefore, when the stomach has taken on a morbid habit, and exhibits an alteration of secretion, the pepsine appears to be really indicated; although in a merely sympathetic action of the uterus and stomach it would be difficult to explain the efficacy of its action." While on the subject, we might say that M. Berthe, in the *Bulletin Gen. de Thérapeutique*, recommends the administration of this article in the form of a lozenge, prepared as follows: A firm paste is made in the usual way, with mucilage of gum Arabic, and aromatized with a few drops of essence of lemon. When the mass is perfectly homogeneous, four grains of amylaceous pepsine are added for each lozenge; the mass is then divided in the ordinary manner, and the lozenges placed in a stove heated to from 77° to 88° F." It has been recommended in other forms, but we think this will prove as pleasant and convenient a method as can well be devised.—*Med. and Surg. Rep.*

On Bismuth and Magnesia.—Some medical papers of the Continent have of late been very loud in their praise of these substances, and a peculiar combination of them which has been offered. From such journals as the *Gazette des Hôpitaux*, *Revue Médicale*, *Revue Thérapeutique*, *Union Médicale*, and *Scalpel* (Belgium), we copy the following facts:

Bismuth was long confounded with lead and tin, and had done much mischief in therapeutics from the arsenic and sulphur it contains. The investigations of Stahl and Dufay have elucidated many facts

respecting bismuth; its composition is now well known, hence it has been prescribed, in small doses, by Messrs. Odier (of Geneva), Guer-sant, Laennec, Récamier, and others, for nervous affections of the stomach. M. Trousseau and others have, on the other hand, used it in large doses with the best effects. But all practitioners know that bismuth produces constipation after the few first doses, so much so that its use must now and then be suspended.

The problem therefore was, to combine bismuth with a substance neutralizing these binding effects, without interfering with the action of that metal. Calcined magnesia seemed to answer the purpose; but it was found that the preservation of magnesia, deprived of its carbonic acid, is as difficult as to free bismuth of all its impurities.

M. Fayard, a well-known pharmacien of Lyons, has endeavored to minister to the prevailing tendency in France of rendering useful medicines pleasant to the eye, the taste, and the stomach. He availed himself of the formula of Dr. Patterson, of New York, to purify bismuth and preserve calcined magnesia, and then mixed these substances with sugar. Hence were formed the bismutho-magnesian powders of Patterson, possessing all the advantages of these agents, without presenting the drawbacks mentioned above.

These powders have been found useful in cases of dyspepsia with headache, anorexia, and vomiting, especially as regards pregnant women, in flatulence, &c. &c., taken in large doses for six weeks or two months. They have also been successfully administered for certain affections for which they are not habitually given, viz.: 1. For headache connected with derangement of the digestion. 2. In the acid vomiting of children at the breast, depending on the inferior quality of the mother's milk. In such cases the best results were obtained by desiring the nurse or mother to make a change in her food, and to take the bismutho-magnesian powders before or after meals. 3. As absorbents of the unwholesome gases evolved during imperfect digestion. These cases, when neglected, are the first to suffer when cholera breaks out.—*London Lancet. Boston Journal.*

— Dr. A. Mercer Adam has commenced in the Edinburgh Medical Journal some sketches of universities, hospitals, lunatic asylums, and mineral baths of Holland, Belgium, Germany and Austria. We extract from the last paper his sketch of Prof. Vrolik, of Amsterdam, and of the University of Utrecht and its distinguished professor, Shroeder Van der Kolk.

“The medical ‘lion’ of Amsterdam is undoubtedly Professor Vrolik, the celebrated anatomist and physiologist. Of course I speak of Vrolik the younger; for, though his father still lives, and is in vigorous health, he may now be said rather to belong to history than to be one of the ‘Men of the Time.’ Accordingly I went to present my letters of introduction to this gentleman, who received me with that frank courtesy, of which my professional brethren in England must entertain pleasing recollections. Vrolik is a tall, heavily built man, with an open

expression of countenance, and very fine dark eyes—possessed of more vivacity than is usual among the Dutch. I spent a very pleasant afternoon in his society, and inspected, along with him, all the valuable private collection of anatomical and zoological specimens which has been accumulated during the joint life-times of his father and himself. This museum is very rich in osteology. The collection of skulls is larger than that of Professor Vander Hoven, of Leyden, and contains magnificent specimens of all the ethnological varieties. Among them is a curious microcephalous skull, which, in several places, is atrophied by the pressure of the cerebrum. A large cabinet is completely filled with illustrations of ankylosis of every joint in the body; and among them are two interesting preparations of perfect osseous union of the symphysis pubis, one of which occurred in a healthy elderly woman, while the other was the result of traumatic inflammation of that part. Another cabinet, equally large and complete, is devoted to specimens of dislocations; among which are some curious preparations of congenital luxation of the femur, showing the increased transverse diameter of the pelvis, resulting chiefly from the strong action of the iliacus internus muscle in this affection. His collection of pelves is extensive, and well selected, containing some interesting preparations showing the various abnormalities and deformities. Among them is a pelvis of enormous size and weight, the largest and heaviest I ever saw, which belonged to an Ethiopian female. But it is especially in preparations illustrative of teratology that Professor Vrolik's museum excels all others that I am acquainted with; for, having devoted a life-time of careful attention to the study of malformations, he has accumulated a good collection, and he is at present the highest living authority on the subject. Such men as he and our countryman, Professor Allen Thomson, of Glasgow, have followed well in the footsteps of Geoffroy Saint Hilaire, and have elevated to the dignity of a science what was formerly a mass of superstitious uncertainty and absurd speculation. A very interesting malformation has just recently been added by Vrolik to his collection, viz., of the variety *Pyrocephalus Syreniformis*, which Vrolik considers quite unique. This seems externally merely a dolphin-like mass of flesh, or rudimentary foetus with undeveloped fin-like extremities; yet, upon dissection, Vrolik found that it contained a perfectly organized skeleton and viscera. The brain was found to be very large; it was proportionally more developed than any other part, and the larynx ended curiously in a *cul-de-sac*. Another new preparation of great interest is a foetus, which was born with congenital umbilical hernia, and also a preternatural anus. Instead of being in the usual place, the rectum terminated anteriorly, at the site of the rupture, in two mouths, thus forming a double anus. The collection of double monstrosities is very complete, and the dissections of the xyphophage variety (where the foetuses are united at the sternum) show that successful disunion by operation is rendered impossible by the fact of their livers being united. In physiology there are also many interesting preparations, especially those which illustrate the recent discovery, made conjointly by Van der Kolk and Vrolik, of the existence of

reticulated venous plexuses surrounding the arteries in the wings of fowls, especially in those which possess great strength of pinion—a provision doubtless designed to facilitate the circulation of the venous blood at times when the veins become forcibly compressed by the strong action of the surrounding muscles. The preparations showing these venous plexuses in the wings of swans and eagles, are very successful and beautiful injections. I did not see the elder Vrolik, as he was from home, nor had I sufficient time to see any of the other medical men of the city, as I was anxious to pass on without delay to the more important medical school of Utrecht.

“As a school of medicine, Utrecht unquestionably stands highest among the Dutch Universities, and the celebrity of several of its living professors has attracted to it much of the attention of the scientific world. The names of Schroeder Van der Kolk, Donders, Harting, and Mulder are very familiar to every student of modern medicine, and the influence of their views have extended to all lands.

“The University of Utrecht is a plain building, which was founded in 1636. It contains a fine hall, which, at the time of my visit, was in daily use for medical and other graduations. At one end of it is a gallery wherein musicians perform during the ceremonies of the graduations, which is gaily bedecked with flags, swords, spears and drums—trophies of the gallant part which was played by the alumni of this college, during the struggle for independence, at the time when Holland was separated from Belgium in 1830, when the students of Utrecht, and of the other Dutch Universities, patriotically enrolled themselves in corps, and fought most valiantly for the defense of their country. Other banners, bearing the arms of Dutch cities, &c., adorn the walls; and high above them all flames the emblem of the University itself, a burning sun, with the motto, ‘Sol Justitiæ illustra nos.’ There are about 400 students, of whom 70 are medical. Each medical class costs about £2 10s. for the session, and the professors, in addition to these fees, receive about £250 each per annum from the Dutch government. In connection with the University there is a very good anatomical museum, chiefly remarkable for possessing a large collection of well executed wax models. The physiological laboratory of Professor Donders is also in the University. It is fitted up with microscopes and other scientific apparatus; among these I observed the most interesting instrument called the Ophthalmotrope of Ruete, which attracted very much notice when it was exhibited last year at the Ophthalmic Congress at Bonn. It consists of a model of the eye, capable of moving exactly as the natural organ, and having delicately arranged silken cords attached to it behind, which act as the muscles of the ball. By means of a graduated scale, and some highly ingenious mechanism, one can see at once, by the lengthening or shortening of each cord, what muscles act in producing every movement of the eye, and to what extent comparatively each of them operates in these processes. The saloons containing Professor Harting’s admirable microscopical collection immediately adjoin Donders’ laboratory. In another part of the town, Mulder, the Professor of Chemistry, has a splendid laboratory, which was expressly built for him.

"Few living physiologists have a wider spread reputation than Schroeder Van der Kolk, the Professor of Anatomy in Utrecht. Though now an elderly man, he still retains all the enthusiasm of youth for the prosecution of physiological science; and when he is talking of his experiments or speculations, he warms with the subject, his manner becomes very energetic, and his face brightens up into a pleasant smile. In appearance, he is a man of about 60 or 65 years—of middle size, with iron gray hair, and a slight stoop, from long study and bending over microscopes. I spent a very pleasant forenoon with him, seeing all his pathological and physiological preparations, about which he discoursed to me most enthusiastically in German. He showed me some finely injected preparations, to illustrate his theory of the non-existence of veins and nerves in the centre of carcinomatous growths, the injection being seen to traverse only the arterial vessels in a section of such a tumor. The pain attending the disease is attributable, he thinks, to the cancer cells entering and destroying the substance of the nerves in the surrounding tissues. We talked a good deal of the celebrated discussion about cancer, which occurred two years ago in the Academy of Medicine of Paris, and he remarked that whatever may be said to the contrary, the microscopical diagnosis of cancer is not to be sneered at as an impossibility. He thinks, however, that in making a histological diagnosis of carcinoma, we should look for the cancer cells in the tissues immediately adjoining as well as in the suspected growth itself. Of Professor Hughes Bennett's 'Researches into Cancer,' he spoke in terms of unqualified commendation; and, in common with all the continental physicians with whom I have conversed, he entertains the highest admiration of the efforts that have been made by Dr. Bennett to establish in England an improved system of medicine, founded on a scientific rational basis, and in which it is sought to reconcile correct diagnosis and successful treatment with the most advanced views of modern physiology and pathology. And all honor, say I, to such men as Van der Kolk, Donders, Kolliker, Virchow, Claude Bernard, Hughes Bennett, and others, for the impetus they have given to the culture of rational medicine. Although we may be unable, as yet, to deduce from *all* their investigations, theories of disease or modes of treatment superior to those which we at present possess, still there cannot exist a doubt that, eventually, all scientific medicine must be established on a rational basis of improved systems of physiology and pathology.

"I have said that Van der Kolk, in his mellow age, has the pleasure of knowing that ere he dies his merits are acknowledged, and his fame European. It is Professor Donders, however, who is now the man of most hope and promise in Utrecht, and to whom, consequently, most of public attention is directed. Like Simpson, Scanzoni, and many other eminent men, he has earned a wide reputation, while yet comparatively young; and his skill as an oculist attracts thousands of patients yearly to Utrecht, to be under his care. Professor Donders is about 40 years old, rather tall, well built, and of very dark complexion; he has a quick piercing black eye, which seems at once to get

at the root of a matter, and he has a frank manner and a winning smile, which irresistibly inspire complete confidence in his skill. He has given an immense stimulus to physiology by his unwearied labors; and his great enthusiasm and his invariable courtesy have rendered him a great favorite with the Utrecht students. The medical literature of Holland is under deep obligations to him; for he was not only one of the principal supports of the *Nederlandsch Lancet*, during the existence of that periodical, but since its decease he and an Amsterdam physician have commenced a new medical periodical, in which henceforth the contributions of the Dutch medical men will be published in German instead of Dutch, as being a more generally understood language."

— In Haarlem I observed, in one or two streets, a curious Dutch custom peculiar to the town, which may be interesting to accouchers. When a birth takes place here a handsome pin-cushion, profusely ornamented with lace, is affixed to the outside of the street door of the house, to notify the occurrence of the event to the public. If a boy has been born the pin-cushion is of a red, and if a girl it is of a white color. A flag of truce is not more respected than this little ensign of millinery work, for as long as it hangs on the door the house is held sacred, and is protected from the approach of duns, bailiffs, or tiresome acquaintances; and even troops, in marching past, must cease beating the drums or blowing their bugles, lest "mother and child" should be hindered from doing well. It is also a common custom throughout Holland, in case of sickness, to append a daily bulletin of the patient's progress, signed by the doctor, to the outside of the street door, so that inquiring friends may read the intelligence without occasioning annoyance to the patient by ringing or knocking.—*Edinburgh Med. Journ.*

— The following statistics in relation to *The Poor in Paris*, are taken from a daily paper:

The administration publishes every year a report of its proceedings. We extract the following from that for 1857: "Paris possesses 16 hospitals for the treatment of diseases, and 12 hospices or places of refuge for the incurable, or for aged paupers. The support of these different establishments requires great resources, and the account for 1857 gives the ordinary receipts at 16,427,117*f.*, and the expenses at 16,132,114*f.* The ordinary receipts are as follows: Landed property and revenues, 970,928*f.*; interest of capital, 700,065*f.*; rents and dividends, 1,417,802*f.*; eventual revenues, 213,214*f.*; concession of ground in the cemeteries, 162,181*f.*; duties on theatres, &c., 1,389,240*f.*; bonus from Mont de Piete, 259,157*f.*; reimbursements by families and communes, 3,561,121*f.*; municipal subvention, 7,207,137*f.*; revenues and foundations, 546,249*f.* Total, 16,427,117*f.*

“At a moment when a fresh circular of the Minister of the Interior has directed public attention to the landed property possessed by the establishments above mentioned, it may not be out of place to quote the following from the memoir addressed to the municipal council by the Prefect of the Seine in presenting the budget of 1859. He says: ‘Of the landed properties possessed by the public assistance of Paris some are susceptible of being turned to account, while others are naturally unproductive. Some of the former might be advantageously sold. In 20 years the administration of public assistance in Paris has realized by its sales of landed property 14,022,814f.; before it was sold it only produced annually 287,507f. Out of the above 14,022,814f. 7,087,769f. were invested in the purchase of 302,326f. of rentes, and the remaining 6,885,044f. served to meet the necessities of the service, particularly for the enlargements and repairs of different buildings.

“‘Other sales to the amount of 6,441,000f. might be immediately made, and the administration of public assistance would still remain the proprietors of productive landed property estimated at more than 22,000,000f.’ The receipts from donations were less in 1857 than in 1856, but the duties from the theatres, &c., increased. Out of the amount of 16,132,114f. of ordinary expenses, those of the hospitals stand for 5,362,467f.; the hospices, 5,043,885f.; the Foundling Hospital, 2,343,680f., and assistance at private houses, 2,818,157f. During 1857 there were 21,411 patients treated in the different hospitals, and 19,154 supported in the hospices and asylums. All the patients in the above mentioned list did not belong to Paris; the banlieue giving a contingent of 12,427.

“In addition to the above number of patients treated gratuitously there are many who were in private rooms, and who paid during 1857 a sum of 148,274f. There is also another class who received the aid of the hospitals—the members of the laboring classes, who receive medical and other assistance at their own houses, where they are able to receive the attention of their families. A sum of 2,895,788f. was expended in this manner during 1857 among 33,301 families. The expense per day of a patient in a hospital costs 2f. 27c., and in a hospice 1f. 47c., which makes the expense of each bed 830f. 61c. in a hospital, and 539f. 77c. in a hospice. The consumption of bread amounts to 2,162,133f.; wine, 1,348,468f.; meat, 1,657,317f.; medicines, 677,152f.”

Buckwheat Considered as Food. By M. ISIDORE PIERRE. The following are the results of M. Isidore Pierre’s investigations on the subject:

“The alimentary preparations made with buckwheat flour form, generally, a wholesome and sufficiently reparatory nourishment; there exists between the two principal kinds of buckwheat flour which are found in commerce a difference of richness in nitrogenous principles, which may be estimated as averaging 45 ¢ cent.

The coarsest and least white of the two is the richest in nitrogenous principles, phosphates and fatty matters; this is consequently the most nutritious, and it is thus easy to see that it may form the sole food of

the rural population in some countries. The preparations known as buckwheat cakes form a food which is comparable to the ordinary bread of Paris, as regards the proportion of phosphates and nitrogenous principles which it contains, and which is superior to it with regard to the fatty matters. The general yield of these preparations, when properly cooked, is about three times the weight of the flour used; they contain, therefore, from 40 to 41 per cent. of water; this yield appears to be nearly independent of the mode of preparation, provided the cakes are properly cooked. There may be, between the various products of the grinding of one batch of buckwheat, with respect to their richness in nitrogen, phosphates and fatty matters, such differences, that one contains *nearly seven times as much* NITROGEN, *twenty-five times as much* PHOSPHATES, and *a hundred and fifteen times as much* FATTY MATTERS as another; the coarsest flour may contain *twice as much* NITROGEN, *four times and a half as much* PHOSPHATE, and *two and a half times as much* FATTY MATTERS, as an equal weight of the buckwheat which furnished it; the bran which proceeds from the ordinary grinding of buckwheat is *richer in nitrogen, phosphates and fatty matters* than the whole grain from which it proceeds, and it would be possible by a perfect method of bolting to separate a farinaceous product, which would be much richer in nitrogen, in phosphates, and especially in fatty matters than ordinary flour. As has been observed with ordinary wheat, the finest and most nourishing buckwheat is not that which contains the largest proportions of the principles to which the most importance has been attached for alimentation. The *difference of composition* observed between the various products obtained in grinding buckwheat are *much more distinct* than the analogous difference hitherto found in the products of the grinding of wheat. The following is a portion of the results which have been formulized, with one kilogramme of matter completely dried:

	Nitrogen. gr.	Phosphoric acid. gr.	Fatty matters. gr.
Whole buckwheat.....	21.3	5.6	32.2
Very fine mill dust.....	7.6	0.96	0.62
Ordinary <i>fine flour</i>	13.0	"	"
Average yellow flour freed from } fine white flour..... }	38.8	20.6	"
Very coarse yellow flour	55.7	24.3	71.8
Ordinary bran.....	24.4	11.9	47.7
Cortical envelopes of the grain } mixed with a little flour..... }	"	"	8.1
Pure cortical envelopes.....	4.9	"	"
Coarse flour freed from the pre- } ceding bran..... }	"	"	90.2

Amongst the products obtained during the grinding of buckwheat, there is one which deserves to fix the attention in a very peculiar manner, that is, the fine white mill dust which is intermediary as to composition between the feculas, tapiocas, &c., and wheat flour, and which

for this reason forms a much more substantial food than the first, and much lighter flour than from wheat. This is, therefore, a product whose preparations, under various forms, cannot be too strongly recommended for weak stomachs, and for food for young children, who cannot take substantial nourishment; it gives them, in a form and in the proportions which suit their delicate organization, the various principles which contain all the alimentary substances requisite for the support of the principal functions; and since these researches were terminated, I have had the satisfaction of learning that practice has already justified these theoretical ideas and recommendations; it has been found a wholesome, substantial, and very economical kind of food.—*Journal of Pharmacy from Loudon Chemist.*

New Caustic Paste with Chloride of Zinc and Gluten.—M. Sommé has been led to the employment of gluten instead of flour in the formation of the caustic paste, by observing that the paste was more adhesive and easy to preserve in proportion as the flour which he employed was more rich in gluten. The gluten is obtained from the best wheaten flour, and the chloride of zinc and the gluten are mixed in the following manner: The chloride is placed in a porcelain capsule, and dissolved in alcohol with a gentle heat; then the gluten in powder is spread uniformly over the liquid mass and triturated, so as to incorporate the two substances completely together. This paste is very plastic, and may remain for a long time exposed to the air without liquefying, and it may be handled with impunity, if there are no excoriations on the skin. It may be used in mass, in plates, and in cylinders, the latter form being applicable in the case of deep fistulæ.—*Druggists' Circular.*

—The New Sydenham Society are about publishing the following works, as we learn from the local Secretary, Dr. C. F. Heywood, 66 West Twentieth Street:

I.—Gooch, on some of the more Important Diseases of Women and Children, and other papers. Prefatory Essay by Dr. Robert Ferguson. II.—Diday, on Infantile Syphilis. III.—Selected Memoirs on Diphtherite, (Bretomneau, Trousseau, Bouchut and others. IV.—A volume of translated Modern Essays on different medical subjects.

The annual subscription to this society is five dollars, which entitles the member to receive all works issued by the society during the year.

—The *Medical and Surgical Reporter*, until recently published in Burlington, N. J., and now in Philadelphia, will with the present month appear as a weekly journal, instead of a monthly. It will continue under the same editorial supervisors that have heretofore given it its excellence, and we wish it a continued success.

—A writer to the *Druggists' Circular* states the number of apothecaries and physicians in the United States to be as follows:

The whole number of apothecaries and druggists at the time of the census of 1850, was 6,139; which was a proportion of 1 to 3,766 inhabitants. I find that in the District of Columbia the number of apothecaries and druggists was 48, and the population 51,687; being 1 apothecary to every 1,076 inhabitants. In New York, 1,082 apothecaries; or 1 to 2,862. Pennsylvania, 1,618; or 1 to 1,429. North Carolina, 34; or 1 to 25,557. Vermont, 19; or 1 to 16,532. Massachusetts, 509; or 1 to 1,747. Virginia, 160; or 1 to 8,885. I find that North Carolina affords the greatest proportion of population to druggists; District of Columbia the least; and Arkansas the next greatest to Vermont, which is next to North Carolina.

I find also the whole number of physicians to have been 40,481. Proportion as follows: New York, 1 to 610; Pennsylvania, 1 to 561; Massachusetts, 1 to 605; North Carolina, 1 to 802; Ohio, 1 to 465; District of Columbia, 1 to 406. In Maine the greatest proportion of population to physicians, viz: Physicians, 1 to 884, and California, 1 to 147. The average is 1 physician to every 571 inhabitants.

—DR. S. W. GROSS has become associated with his father, Prof. S. D. GROSS, in the editorial conduct of the *N. A. Medico-Chirurgical Review*.

—We have received the *Physicians' Visiting List for 1859*, from Messrs. Lindsay & Blakiston, Philadelphia. Its usefulness is too well known to require a more extended notice from us. Those who have used it will not fail to do so again, and those who have not will immediately perceive the great merits of this pocket companion, day-book and ledger.

—*The Nashville Monthly Record of Medical and Physical Science* is the title of a new medical journal, the first number of which appeared in September. It is edited by *Daniel F. Wright, M.D.*, and *Richard O. Currey, M.D.*, both Professors of Shelby Medical College, Nashville, Tennessee. Dr. Wright was formerly editor of the *Memphis Medical Recorder*, and Dr. Currey of the *Southern Journal of Medical Science*. These are discontinued, and their resources united in the new journal, the first number of which gives a good earnest of a valuable addition to our medical periodical literature. Nashville now issues two medical journals, and, by the establishment of the Shelby Medical College, has two medical colleges.

—The article on *Aneurism of the Axilla*, by DR. BONTECOU, which appears in this number of the MONTHLY, has already been partially published in the State Transactions. It having, however, in a great measure been re-written by the author, and much new matter added, we have thought it right, with this acknowledgment, to place it among our original communications.

Books and Pamphlets Received.

A Manual of the Practice of Medicine. By T. H. Tanner, M. D., F. L. S., &c. First American, from the Third Revised and Improved London Edition. Philadelphia, Lindsay & Blakiston. New York, S. S. & W. Wood, 1858.

The Transactions of the New Hampshire Medical Society—Sixty-eighth Anniversary; held at Concord, June 1st and 2nd, 1858. Manchester, 1858.

The Physicians' Visiting List, Diary, and Book of Engagements, for 1850. Philadelphia, Lindsay & Blakiston.

Annual Report of the Superintendents of the Poor of Kings County, for the year ending July 31, 1858.

Physiology, Pathology, and Therapeutics of Muscular Exercise. A paper read before the Cook County Medical Society. By W. H. Byford, M. D. Chicago, 1858.

Tilden and Company's Book of Formulæ. New Lebanon, N. Y., 1858.

The Annual Address delivered before the Connecticut Medical Society, and the Citizens of Waterbury, at Waterbury, May 26, 1858. By Benjamin Hopkins Catlin, M. D., President. Hartford, 1858.

The Half-Yearly Abstract of Medical Sciences. Edited by W. H. Ranking, M. D., &c. Philadelphia, Lindsay & Blakiston.

The Liverpool Medico-Chirurgical Journal, Nos. 1 to 4. 1857–8.

The Uræmic Convulsions of Pregnancy, Parturition, and Childbed. By Dr. Carl R. Braun, Professor of Midwifery, Vienna. Translated from the German, with notes, by J. Matthews Duncan, M. D., F. R. C. P. E., Lecturer on Midwifery, &c. New York, S. S. & W. Wood, pp. 182, 75 cents.

Announcement of Lectures in Atlanta Medical College, for the session of 1859.

The American Homœopathic Review. Edited by Roger G. Perkins, M. D., and Henry M. Smith.

Annual Address delivered to the Graduates of the Atlanta Medical College, at the Commencement, September 2, 1858. By Curtis B. Nottingham, M. D., of Macon, Ga.

Notice—Our subscribers will please notice that the Office of Publication of the MONTHLY has been removed to No. 12 Clinton Place, to which address they will hereafter send their communications.

—We would respectfully call upon all those who are in arrears for 1857, and those whose subscriptions are not paid up for the present year, to answer our request for payment made in a previous number.

THE AMERICAN MEDICAL MONTHLY.

NOVEMBER, 1858.

ESSAYS, MONOGRAPHS, AND CASES.

The Treatment of Paralysis of Motion. By CHARLES F. TAYLOR, A.M., M.D.

The prognosis in cases of paralysis of motion should always be guarded, and should be governed less by the degree of paralysis than by considerations of the character and seat of the lesion in the nervous system. Where there is actual organic lesion in any of the nerve centres, it is not probable that medical treatment can be of any avail, except, perhaps, to ameliorate some of the most annoying symptoms; but it is so difficult to distinguish in many cases, with certainty, between the organic and functional lesions, that nearly all cases should have the benefit of any doubt, and be subjected to the proper treatment for a sufficient length of time. Among those cases having the slightest chance of recovery, may be mentioned softening of the cord from excessive venery, syphilitic affections, and exostoses, and some cases arising from violent concussions. Still, even in these discouraging cases, treatment may be attempted, for even a very slight relief may be of great value to a person helpless from loss of voluntary motion; and a perceptible improvement is generally witnessed, if not an actual process of cure; the little possible motion is regained which may have been supposed through despondency to be entirely lost.

But that there are many cases of continued paralysis of motion that are merely functional, and not caused by organic lesion in any of the nerve centres, is fully attested by the results of applying a rational system of medical treatment, as well as from the results of *post-mortem* examinations. Restoration of impaired nerve function, as well as restoration of nerve tissue, takes place very slowly.

Even the slight pressure of the fingers on a nerve trunk, as of the ulna, where it passes over the internal condyle of the humerus, will so far paralyze the little and the ulnar side of the ring finger, that several minutes elapse before we get complete control of them.

Should this pressure be continued a certain length of time, the paralysis would doubtless be more or less complete, though the nerve tissue might remain perfectly intact. Now, there are various ways in which paralysis of motion may exist and be continued indefinitely without organic lesion in the nerve centres, except so far as imperfect nutrition always accompanies a loss of function. Any cause, local or general, capable of overwhelming the nerve centres may produce paralysis, and when once produced, though the cause be removed and no organic lesion remain, the paralysis may continue, because the function once lost is with difficulty re-established, owing to the low nutrition in the nerve centres while the cause existed, which, when the cause ceases, still renders volition impossible, and without which performance of function there can be no improved nutrition; for it is by the performance of function that the nutrition of every organ takes place. Then we often meet paralysis of a limb in children, which continues through life, though robust health may have followed the fever or other disease producing it. Many cases also recover, but not until the corresponding member on the other side has got the start of a year or two in growth. Also, cases of paralysis arising from Potts' disease of the spine frequently recover after ankylosis has taken place and the pressure from effusion removed, or the inflammation has subsided, &c.

But whatever may have been the cause of the paralysis, whether effusion into any portion of the cerebral mass, inflammation of the membranes of the chord or brain, the shock of violent disease or other cause, the first indication is, of course, to ascertain the cause and remove it.

Unfortunately, in most cases, even the proximate cause lies beyond our reach, except by indirect means. Where the access of the disease has been gradual, the treatment may cautiously commence; but in recent cases, especially if they are severe, much treatment of any kind is to be deprecated. The nervous system is already overwhelmed by the

force of some powerful shock, and till it has had ample time to recover, and has recovered so far as it is capable of reacting, any efforts to act on or through it will be in danger of doing harm instead of good.

The rule that surgeons apply to cases of severe injuries before performing an operation is equally applicable here. We must wait for reaction to take place. It may be several weeks or several months, according to the nature of the case and the recuperative powers of the system.

Whatever may be the utility of medication in some stages of this disease, I regard the exhibition of strychnia in the first stages of paralysis, goading up the nervous system, already completely exhausted, as being particularly harmful. It adds nothing to the capacity of the nervous system, while it still more completely overwhelms it. But every hygienic means should be brought to bear in the first stages of this disease. Special attention should be paid to the diet. Paralytics are very apt to live badly, taking altogether too much food to be properly disposed of in their confined condition; they often eat to surfeit, without being aware of it. There is also great deterioration in the quality of general nutrition, interstitial change taking place much more slowly, and much less perfectly—so much so, that the odor arising from the body and breath of paralytics is precisely like that of very old persons. Even the expression of countenance and intellectual manifestations have the same senile character. Oxygen is the great purifier, and the patient should be kept in the purest atmosphere, frequently changed, and allowed to come in contact with the skin to yield its tonic effect to that organ, in order to excite respiration; and tepid spongings of the body will be found useful for the same respiratory purposes, as well as for cleanliness. Of course, such special medical treatment as is indicated by the present condition of the case—as for instance, to cause absorption of an effusion or clot, to attend to the digestive and depurating functions, to support the strength, &c., by any means best calculated, in the physician's judgment, to accomplish these purposes—should be employed at this stage of the disease. In the absence of the pressure of muscular contraction, œdema of the extremities may be relieved by frequent kneading with the hands and pressure on the soft parts. But in cases accompanied by spasmodic action of the muscles from reflex influence, it is not common to find œdema. But, besides plenty of pure air, no more plain food than can be vigorously digested and properly assimilated, and whatever may be embraced in general hygiene, there is very little that can be done in recent cases without danger of injury, until the system begins to react from the shock. Even without

treatment, or in spite of treatment, many cases do react, and after a while entirely recover. But the great majority of cases convalesce to a certain degree, and there stop. It seems impossible, with the treatment usually adopted, to get them beyond a certain point. But suppose the system has had time to react after the inception of the disease, or suppose the progress is gradual, the patient becoming conscious of having less and less control over certain members, what are the indications of treatment? The principal indication evidently is to re-establish the connection between the muscles and the brain. This is to be done in the same manner that it is done in health, viz., *by the use of the muscles*. In health, every movement makes the next movement possible. In paralysis of motion, how shall the first movement be accomplished? After long inaction—first from disease, and subsequently from habit—how shall volition be communicated from the central to the peripheral brain? Let us follow nature.

The object is a definite movement; the means are muscular contractions; the cause is the will. We attempt to accomplish this, first, by a process of exclusion; that is, we exclude all other movements while attempting to perform the required one; and not only that, but the attempted movement must be accomplished in every case without a single failure.

Suppose a case of hemiplegia. The patient has no ability to raise the arm; and not only that, he has lost even the power to try. No person can attempt anything that he *knows* he shall be unable to perform. So that his volition, with reference to his paralyzed side, if not entirely gone, is reduced to its minimum quantity. A simple effort of the will, at the physician's request, does, in such circumstances, but very little good. An effort of the will, to be of any service, must be recognized in the peripheral as well as central brain. How can the peripheral brain be made to recognize volition, so as to impart its stimulus to the muscular fibres with which it is in contact? In the first place, the patient must be placed in such a position, that all voluntary muscular motions to keep himself in position will be avoided; he must be either lying or half lying, and in such a manner that, being supported in all directions and perfectly comfortable, he will employ no other muscles than those belonging to that portion of the paralyzed side which it is determined to act upon.

For instance, suppose we wish a flexion and extension at the elbow; having placed the patient in the position above described, we take the paralyzed arm in our hands, and, extending it horizontally, rest the arm firmly against our thigh, holding it firmly with one hand, while

with the other we grasp the forearm near the wrist. It will be remembered that the patient is in such a position that neither innervation nor arterial blood—both of which are necessary to muscular contraction—will be diverted to any other part by any other movements. This is very important to remember in the treatment of this disease; for, if at this stage of the treatment, other movements are going on at the same time, the volition will be diverted from the paralyzed muscle to those more easily affected and already occupied, thereby seriously interfering with the intended movement. Now tell the patient to bend the elbow very slowly and very gently, and not to exert all his power in the effort. We are supposing a case of complete loss of voluntary motion. It is well known that if a man in perfect health should exert all his available force in a single effort or succession of efforts, the consequence would be a diminution of power, and even a decrease in the size of the muscle, rather than an increase of them. The same rule will apply as much more forcibly to the paralytic as his fund of available force is less than in health. In commencing the treatment, the object is to direct volition to a particular group of muscles, and nowhere else at the same time, in order to obtain the maximum amount of muscular contraction with the minimum expenditure of force; but, as in health, where a succession of such efforts are to be made without fatigue, so here only such an intensity of volition is employed as can be repeated a certain number of times, with equal force, without exhaustion. In order to guard still further against the ill effects of too great effort, only three or four are made at one time, when the patient rests. Eight or ten different movements given at one sitting are enough for one day. By doing a little, we accomplish something; but by over-doing ever so slightly, we destroy all the benefit that preceded.

At the first moment that this effort is made by the patient, without waiting to allow him to see whether or not the forearm moves, the arm is to be carried in the required direction, as though the flexion had been done voluntarily. Thus we have an effort concentrated upon a particular part, and a movement following the effort, though as yet not as a consequence of it. But something certainly has been accomplished even in the muscular tissue. In the flexion of the limb there is the stretching of the extensor muscles and the mechanical contraction of the previously stretched flexor muscles, as in health; both affecting somewhat the capillary circulation, and making some impression upon the peripheral nerve loops, sending in turn at least a reflex influence toward the central brain, thus doubling the effect of the

movement. The effort, though gentle, should be concentrated, well-sustained and determined, in order to accomplish which, the will of the operator should always operate through the patient. It is not enough that the patient be told what he is to do, and then be left to do it as well as he can, for inability to do this is the essence of his disease—but in everything he does he must act only under a command. A kind, but determined command is followed by an increased desire, which is the most favorable condition for an effectual volition, because a volition thus begun commences at its maximum power, and continues full and well-directed to the end. Although the operator himself actually makes the movement which is perceptible to the eye, namely, the flexion of the forearm in the case supposed, it is more to secure the *morale* of the patient—for he sees it move while he is trying to move it; he cannot tell how much of the movement belonged to himself, but feels and hopes that he helped some; and as his effort was slight, perhaps he could do more. Yet in all hopeful cases there probably is a certain amount of contraction resulting from every effort, but, being insufficient to make the sensible motion, it ordinarily goes for nothing. This usually unseen and unknown penetration of the will into the tissues, toward which it has been sent, and the hope of being able to increase it, constitute our basis of expectation.

Suppose a force of two pounds of muscular contraction to be capable of raising the arm; if we began with a force of only one ounce, it might be increased to thirty-one ounces, and still the arm remain unraised; but the most hopeful change has been going on in the nerve and muscular tissues, while yet there is no palpable result. If we have formed the habit of obedience in a few muscular fibres, this habit and the increased nutrition resulting from this functional act may in time extend to others till the normal condition is fully restored. We may avail ourselves of still another means of assisting volition to accomplish its purposes. I allude to the dual arrangement of the organs and the tendency to symmetrical development. Now, if the patient be made to bend both the sound and the paralyzed limb at the same time and in the same manner, taking care that the will be equally intent upon both movements, it will increase the tendency to contraction in the palsied muscles to follow the effort. But such movements should be used only a part of the time. I have mentioned that innervation and muscular contraction take place under the influence of arterial blood. The will exerts a powerful influence upon the circulation, increasing it in the parts towards which it is directed. This is another reason for the gentle and continued effort, thus allowing time for the circulating fluids

to arrange themselves under this stimulus. But mechanical means may sensibly aid in effecting this result. During the cessation of voluntary motion, the circulation in the capillaries becomes enfeebled, and increased exosmosis of the fluids takes place through the distended walls of the vessels; the stagnant blood becomes more venous than arterial, and is infrequently purified by being brought into contact with the oxygen of respiration, owing in a great measure to an absence of the mechanical pressure to which the contents of the capillaries and other fluids are subjected during health by the contraction of the muscles containing them. This mechanical aid may be partially supplied from without, by means of pressure of the hand and kneading of the muscles with the hand and fingers. The retarded circulation that may thus be accelerated in passing to the heart and lungs, would be laden with impurities to be eliminated at the proper emunctories. To carry out our attempt to imitate nature, and follow her method of substituting a physiological for a pathological condition, we endeavor to induce an arterial condition of the capillaries by stretching the palsied muscles, or kneading them while in an extended position. Reflex action is to be avoided, because contractions produced in this manner, being entirely abnormal, seriously interfere in establishing the control of the will, which is the object aimed at; but direct action may be stimulated in some cases by gentle pressures along a nerve trunk, or on a plexus of nerves; slight percussion along the spine and over the sacrum, &c.; but these stimuli should never be used where there is reason to suspect organic lesion of the medulla spinalis. It is a remarkable fact that though organic disease of the cord is a hopeless disease, yet, being characterized by frequent spasms of the muscles, it is not attended by that wasting away of the muscular tissue that usually follows paralysis unaccompanied by such reflex contractions, though the latter justifies a much more favorable prognosis. Muscular contraction, though abnormally produced, favors the circulation and nutrition in this tissue, though the exigencies of the case prevent the penetration of the will beyond the seat of the lesion. But spasms of the muscles accompanying resolving or functional disease of the nervous system, do not seriously interfere with the treatment or the progress of the case. The foregoing remarks are applicable to complete paralysis of motion. But in those more favorable cases of partial paralysis, where the will has regained, or has never been deprived of a portion of its control of the muscles, the principles of treatment indicated in complete palsy are equally applicable, with the addition of another method of still more perfectly concentrating the will upon the designated muscles. As the first

method may be called the process of exclusion—that is, excluding the system from participating in any other movements—so this may be called the process of concentration, or concentrating all other muscular efforts of the whole body upon the designated member which shall be cumulative in the palsied muscles. There being still some power in these muscles, such movements, besides those previously explained, may be given as require contractions in other muscles besides the affected ones; but how feeble soever the contraction of the affected muscles, the contraction of the other muscles, be they ever so remote, should always be *less* than in the affected ones, and should be such as are necessary to complete the contemplated movement. For instance, in hanging by the hands it will be seen that, from the necessities of the case, all muscular efforts in all parts of the body are rendered necessary from the position, and that the force of contraction gradually increases from below upwards, and is the most intense in the hands and arms. And as the volition and contraction converge towards the upper extremities, so do the innervation and circulation flow in the same direction. This is what I call a *cumulative* movement. But the same care should be taken to avoid fatigue as in the first case, and all through the treatment this idea of calling out only so much force as can be easily and pleasantly borne, and the depression of which effort can be quickly rallied from, and that leaves no exhaustion behind, should be kept in view.

In paralysis of motion the principles just laid down should govern the construction of every prescription of movements. But there are other indications that may be responded to by the use of movements. Those cases of paralysis that arise from congestion of the dura mater, or any abnormal nutrition of the membranous envelops of the cord, will have this morbid nutrition diminished by inducing a higher nutrition in the contiguous muscles of the back. This may be accomplished by various flexions of the back in different planes, such as will bring the dorsal muscles into action; at the same time the movement acts directly on the cord itself through the ligamentum dentata, thus supplying a healthy mechanical stimulus to the cord. But we should not make any of the above mentioned movements till we are sure of a good circulation in the extremities. Indeed a peripheric circulation once thoroughly established, central congestions will be proportionally lessened. This may be attained principally by movements on the unaffected portions of the body, such as will promote an arterial circulation in the extremities.

Some of the most annoying symptoms in cases of palsy are con-

nected with the bowels and urinary bladder. Paraplegia is almost always connected with constipation of the bowels and incontinence of urine. The constipation is often so severe as to require large doses of the most powerful cathartics to effect an evacuation of the bowels, which being repeated every few days seriously interfere with the patient's chances of recovery. The constant liability in some cases to, and the annoyance and inconvenience of, involuntary urination is a great source of depression and discouragement to the patient. The treatment for these cases is so simple that many might refuse to employ it, but the efficacy of which is fully confirmed by experience.

In constipation depending on paralysis of the nerves controlling the motions of the lower bowels, and the sphincter ani, the treatment must be adapted to this indication. We must act through the capillary circulation and innervation of these parts. This may be done by acting by mechanical means from without inwards. Let the patient be laid on his back, his arms stretched up over his head and held by an assistant; then, with both hands laid flat on the abdomen, make a rapid shaking or vibration of the abdomen and its contents. This may be followed by kneading with the fingers along the course of the ascending, transverse and descending colon, pressing deep down into the tissues. If spasm of these muscles should follow the vibration, then the arms need not be raised over the head, or the knees can be raised and held by an assistant, or the shoulders can be elevated, the object of which will be to relax the muscles of the abdomen; but the treatment in that case will not be so efficacious as if applied over the extended muscles. Also in the same position the legs may be raised by the patient himself, bringing the abdominal muscles into action. For paralysis of the bladder and sphincter ani, the thighs are held flexed upon the trunk, and a vibration is made with a blunt stick upon the perineum. Gentle percussion across the hips from one trochanter to the other, and slight pressures along the sciatic nerve, where it issues from the pelvis, will stimulate the nerves given off to the lower bowels.

This simple local treatment, with the general tonicity induced by the general treatment, has been sufficient hitherto in my practice to overcome the worst cases of paralytic constipation and incontinence of urine. Where there is troublesome spasmodic action of the muscles, this is best overcome by very slow bendings of the joints, while the patient remains perfectly passive. The spasm which the muscles at first take on, upon being put to the alternate stretch and relaxation, will gradually subside as the nerves become accustomed to those impressions so nearly resembling normal contraction. Where there is spas-

modic action of the muscles following an effort, the volition being divided, as it were, and scattering to different muscular groups in remote parts, great pains must be taken to concentrate the will upon the designated member. Indeed in many of these cases nothing but the greatest tact, patience and perseverance can effect a cure.

Of course, a treatment like that which I have just endeavored to describe, acting entirely through the general and local nutrition, through functional manifestation, implies a certain amount of time and considerable patience; yet, considering the nature of the disease, the progress in some cases is remarkably rapid.

Dr. Batchelder, in his excellent report of cases of paralysis treated by him with *exercise* in the New York Hospital, mentions the difficulty he found in inspiring these sufferers with sufficient ambition, and that they were generally satisfied with a slight improvement, and refused or neglected to make further effort. Now, I never have encountered any such difficulty, but rather the contrary. Making due allowance for the difference in the character of my patients from those to be found in hospitals, yet I think it was mainly owing to the exhaustion following the kind of exercises that his facilities allowed him to contrive for them, though he seemed sensible of the injurious effects of over-doing. Greater precision and less effort have an encouraging effect upon the patient's mind, especially when he sees day by day that he can do many little things that before he supposed to be impossible.

Electricity has been a good deal used in the treatment of paralysis, and even now almost all physicians resort to it when other remedies fail, as though the last hope lay in its employment; but it seems to me without sufficient reason either in experience or philosophy. I know it has been held by respectable members of the profession, and is now largely entertained by certain among lay people, that the nervous system is a sort of galvanic battery; that the nerves are electric conductors, and that innervation is the conduction of electricity. And where these views are not entertained, there seems to be a sort of tacit acknowledgment that electricity somehow ought to be good for paralysis, if we only knew how to administer it. Let us look for a few moments at the scientific bearing of the electrical treatment, for it is one of those means that charlatans seize upon to prey upon the credulity of the public, to the detriment of legitimate medicine.

Innervation is an organic functional act, subject to the same organic laws of waste and repair of the tissue performing it as all other manifestation of function. This we know by the large amount of

phosphates and other constituents of nerve substance to be found in the urine after excessive mental exertion, fright, hysteria, &c., the same as urea is thus found after great muscular effort. A little reflection will discover that there is much less analogy between the nerve force and electricity than is commonly supposed. The idea of *supplying* it to the system is even more absurd than the supposition that, because India rubber and muscular tissue are both elastic under certain circumstances, the former can be substituted for the latter!

Besides, this idea of *introducing* electricity ignores the manifest qualities of this imponderable agent itself. Electricity is not an entity—a substance that can be poured into or through anything, like a fluid, but it is a *condition*. Polarization in solid conductors and electrolysis and decomposition in fluid conductors is all there is of what is called the passage of electricity, and there is no more scientific reason for supposing it would be remedial in any manner whatever than any other chemical agent. And as organization in the nerve substance is necessary to its restoration, and as the conduction of electricity is chemical change or disorganization, (electrolysis,) diseases of the nervous system would seem to be ill adapted to the employment of this remedy. And such I believe to be the case. This is not to say that electricity may not be a valuable remedial agent, but the genius has yet to arise that shall place its employment upon a scientific basis. When the cause of the paralysis is unmistakably muscular, as where there is retraction or relaxation of the elastic and muscular tissues; or when there is any reason for wishing to modify the quality of the fluids and the organic processes in the cell formations in the mass of the tissues, then electricity may be employed, within certain limits, to advantage. The chemical change occurring with the passage of electrical currents affords a certain amount of stimulus that may be salutary while not extending to lesions in the nervous system, where we cannot afford to make cause for repair beyond that occurring as a part of its own functional manifestation.

CASE I. John Erskine, a lad fourteen years old, was brought to us on the 27th day of April last. Six months before, he met with an accident, causing a backwards dislocation at the right elbow joint. It appeared to have been properly reset, and though there had been adhesions, they had been broken down, and at that time there was perfect motion of the forearm, both of flexion and rotation. But from the first there had been nearly complete paralysis of the whole arm, but much more complete below the elbow. This state continued with scarcely any improvement up to the time I saw him, six months after

the accident. At that time there was great emaciation of the whole arm, but especially of the hand. Indeed the muscles of the hand seemed to have disappeared, and the skin of the palmar and dorsal surfaces could be brought in apparent contact between the metatarsal bones without difficulty. Extension of the fingers was impossible, but he could contract them slightly; they remained in a drawn up and crooked position. The hand dropped and remained in the position where its specific gravity brought it while wearing his arm in a sling. There was impaired sensation, and the hand felt cold to the touch. This case, though sufficiently severe, yet arising from a local cause, showed a most remarkable recuperative power. He was treated nearly every day for about five weeks, when he was dismissed, *cured*. He had perfect motion even in those muscles—as the adductors of the thumb—that seemed at first to be completely palsied, and the increase of muscular tissue was remarkably rapid; sensation and warmth returned, and when he left there was only a slight difference in the size and power of the muscles of the two hands. About a month later, I heard by a fellow patient who saw him, that the muscles of that hand had attained their full size and vigor.

This case is a very simple one, and is principally important as clearly illustrating the view of the pathology of curable cases of paralysis of motion, as set forth in the first part of this paper.

CASE II. A gentleman from Connecticut, thirty six years old, a large, fine-looking, well-formed man, but not plethoric; married; of very temperate habits; an artist by profession; felt numbness in the lower extremities on the fifteenth of March, 1856. He failed rapidly till the middle of April, by which time there was complete paraplegia—there being neither voluntary motion nor sensation below the diaphragm. After the first few months he rallied somewhat, and became able to sit up a little, and could move the left leg with tolerable facility, but the right leg remained nearly useless; there was slight power in the extensor muscles, but none whatever in the flexors. Sensation very imperfect, and he had remained without sensible improvement for about one year. Commenced treatment on the 4th of May, 1858. At that time he had not had a single voluntary evacuation of the bowels since his first attack, more than twenty-six months before, and the amount of medicine taken and the number of injections used to effect a passage were enormous. There seemed to be complete paralysis of the sphincter ani, and the evacuations were of a flattened shape, like a knife. The urinary bladder was also equally affected, the urine passing involuntarily at all times, rendering the wearing of

a urinal constantly necessary. He complained of a sense of tightness, as of a band drawn around the waist; there was also frequent spasms of the muscles of the legs—especially of the right leg—often causing the limb to take on a jerking vibratory motion, which was excited and aggravated by attempting to move, as of turning in bed. These spasms often lasted six or eight hours without cessation. He could not stand alone for a moment. He was under my personal care and treatment about two weeks, when his father, being a physician, took him home and continued the same treatment at his own house. When he left he could stand alone, and take several steps with assistance; had a perceptible increase of power and motion in both legs, especially in the right, the flexors of the knee having been brought under control; could do his part in all the duplicated movements required of him, and, for several days before leaving, had had free spontaneous evacuations of the bowels of the natural cylindrical shape. Two months subsequently, namely, about the middle of July, I saw him at his father's in Connecticut, where the treatment had been continued as well as their facilities afforded, up to that time. At that time, he mentioned that he had had no incontinence of urine since the day he left New York; bowels were regular, and the sphincter ani continued to perform its functions; he could get up and down with perfect ease, and could walk about the room, and even out to the neighbors, with a little assistance. In fact, all the symptoms of paralysis were gradually subsiding, and sensation and motion were gradually returning. I have just got a letter from him, (September 17th,) saying that he is rapidly improving, and can walk quite well, without any other assistance than canes. Continues treatment.

CASE III. This is a little girl, eleven years old. About six years ago she had an attack of brain fever, which caused paralysis of the left side. She gradually recovered, however, except the left upper extremity continued palsied. The whole arm and shoulder were very much atrophied, and the arm hung useless and motionless by her side, and, as is usual in these cases, the forearm was so far pronated that the dorsal surface of the hand remained in contact with the thigh.

There was considerable use of the fingers, and she could cling to anything the hand was placed on, though the fingers were considerably deformed through relaxation of ligaments at the articulations. The deltoid and biceps flexor muscles seemed to be entirely wasted away, and for a long time there could not be perceived the slightest tremor of muscular contraction in these muscles, but voluntary extension of the forearm was possible. The humerus was emaciated and curved, and

the olecranon process was shortened, so that in extension of the forearm it would be partly flexed backwards upon the dorsum of the humerus. Commenced treatment February 5th, 1858, and has continued daily, with about six weeks' vacation in July and August, ever since. Improvement has been constant and satisfactory. She now has the use of every muscle in that arm, including the deltoid and biceps flexor, and there has been a large increase of muscular tissue, which is to be seen and felt. She can now flex the forearm, and with a slight assistance can stretch the arm over her head. The shape of the hand is perfect; she carries the palmar surface of the hand properly inwards, and is using that hand and arm more and more about her plays, though, having been useless for so long a time, there was some difficulty at first in getting her to commence to use it, but now she is quite handy with it. Continues treatment.

CASE IV. M. E. B., a little girl from Rhode Island, seven years old, came under my care the third day of March last. When one year and a half old she met with a fall which brought on a gradually developed paralysis of the right side. Of this, however, she recovered so far as to get nearly perfect use of the right hand, though it is somewhat the smaller of the two; but the right leg, after the first efforts towards recovery, seemed to get no better, but rather grew worse. It was one inch shorter than the left, and very small and feeble. She often fell down in walking, and could not sustain the weight of the whole body on it for a single moment; whenever she attempted to do so, it would immediately give way, and precipitate her to the floor; there was great relaxation of the ligaments of the foot and ankle, the toes were drawn down towards the heel, particularly when she was excited; indeed, the bones of the foot were so loosely held together, that they could be easily moved upon one another with the fingers; and there was general indication of relaxation in that leg. She was under treatment about two months and a half, and can now use that leg with very great facility and strength. It has grown larger and stronger, being now able to sustain the whole body with ease, even while courtseying upon it, till the leg is at right angles with the thigh, and then raise into the upright position again; the foot is natural shaped, and the former relaxation about the ankle and foot is nearly gone. This case had also a lateral curvature of the spine to the right, caused by the short leg and weakness of that side; but it was entirely removed by the treatment, and a recurrence prevented, by causing her to wear a cork sole on the right foot, so thick that the right hip is of the same height as the left. She left treatment and returned home

nine months ago. I have just heard that she has continued to improve, till now the previously deformed foot is sometimes mistaken for the other, its size and shape are so nearly perfect.

Many more cases might be cited, but enough have already been given to attest the efficacy of the movement cure in the treatment of paralysis of motion. I have not attempted, in this paper, to give the complete pathology of all cases of paralysis of motion—which is supposed to be understood by every physician—but only so much as would illustrate the treatment herein advocated. Without pretending that it is always applicable, but believing that it answers many indications not otherwise reached, and that in many cases much suffering may be relieved, and many subjects may be raised from helplessness to usefulness, I commend this subject to the attention of the profession.

Letters on Italy.—No. 3.

HALLE ON THE SAALE, *September 8th*, 1858.

MESSRS. EDITORS—The constant occupation which the advantages offered to the student by the Hospital of Vienna necessitate, prevented my continuing while in that city my cursory observations on matters which I found of interest in a professional way in the land of music and poetry. I concluded my last letter with Naples. The road leading from this city to Rome passes through the ill-famed Pontine marshes, which, from the baleful reputation that has so long clung to them, deserve a passing notice. They are entered on the post road which follows generally the Appian Way, (the latter being in one or two places distinguishable from its immense polygonal slabs, worn by the wheels of ages,) at a point about half way distant from Naples, and just opposite to the remarkable mass of rock known to the ancients as the charmed *Circe*, which rises like a colossal monument out of the broad waste, and separates it from the still broader waste of the Mediterranean. This road passes through them for a distance of 35 to 40 miles, which is nearly their extreme length, while they cover a plain between the mountains and the shores of the sea, of a mean breadth of nine miles. The appearance of the entire tract is desolate in the extreme. But it is by no means all of it under water, or even so wet as to be boggy. On the contrary, large portions of it have been reclaimed by a system of drainage, introduced by Boniface VIII, and carried on with more or less energy until the time of Pius VI, under

whom it was completed. These works are still maintained by Government, at an annual outlay of about 4000 scudi.* Their best efforts, however, have only succeeded in making it available for grazing purposes—but a very small portion being subjected to cultivation. Large tracts of it are almost unapproachable by man, and here buffalo, deer, and wild boars enjoy undisputed possession. These buffaloes, large herds of which we frequently saw close to the road, are by no means the noble bison of our prairies, but a heavy, ill-shaped, cumbersome beast, susceptible of domestication, and often trained to the yoke.

It is probable, from the accounts given by the Latin authors of that date, that either the drainage was more thorough under the energetic rule of Augustus, than in later days under the Pontiffs, or that causes are now at work which render the accomplishment of this end more difficult than it then was. This latter ground is certainly tenable, for there is little doubt, from records, both written and traditional, of the times previous to the Roman domination, that this now pestilential marsh was once the site of flourishing cities, and the granary of that entire region.

The dangerous character of the malaria here has undoubtedly been overrated. Like that found in similar districts in our own country, it is seriously to be feared only in the autumn, and then chiefly at night. Its great fatality, which cannot be gainsaid, is probably to be attributed to the thriftless and improvident character of the class of people who are exposed to it, and their inability to provide themselves with proper means of protection against its influence. At certain seasons numbers of the peasantry spend entire nights, not only under the open sky, but without even the safeguard of a fire, and the climate must be a very salubrious one which will stand such a test.

There can be little doubt that in a well-built house, and with proper precautions, such as avoidance of exposure, and careful ventilation by means of fire, an entire season might be passed in many parts at least of these dreaded marshes, with a good degree of impunity.

The pallid, sallow faces and listless movements of the few wretched inhabitants whom we met, however, sufficiently prove that they do not, as indeed they cannot, employ these very necessary precautions.

The climate of the City of Rome itself is, in the main, salubrious—being temperate, not subject to sudden changes, and tolerably dry. The mean extremes of its temperature are from 44° 5' of Fahrenheit, to 75°. And it is a rare thing to have the thermometer reach 90°.

* The value of a Scudo is very nearly that of our dollar.

It will thus be seen that its dreaded heats do not compare with those of our own cities. The inhabitants observe the precaution of never walking in the sun during the warmer months, partly from the known deleterious effects of a hot sun in malarious climates, and partly from a dread of the extreme contrasts of temperature in passing from the immediate influence of the sun's rays into one of their damp, chilly, sunless, narrow streets. Indeed, it has passed into a proverb among them, that "none but *Englishmen and dogs* walk in the sun."

They are also peculiarly careful to avoid exposure to the air during the hour immediately following sunset, that being deemed the most dangerous period of the day; so that just at that time the streets of the Imperial city are almost deserted. The malaria is considered dangerous from July until October. The miasms appear to be dense and heavy, rising only five or six feet above the surface, as is attested by the fact that they do not overleap the convent walls, the nuns being able to promenade in their gardens with impunity when the rest of Rome must house itself. The influence which an increase of population has in combatting the poisonous influences of a malaria, probably in a great measure from the increased number of fires which it renders necessary, is clearly thrown in the comparative immunity enjoyed by the Ghetto or Jews quarter, which, notwithstanding that it is as filthy and disgustingly dirty, and as closely crowded as the quarters occupied by our Israelitish brethren in European cities generally are, yet sends much less than its quota of those suffering with malarious diseases to the hospitals.

A residence in Rome has been found serviceable in the earlier stages of phthisis, but not in the more advanced. Is this not to be attributed to the antagonism between the two affections, or rather the influence of a malarious atmosphere in checking the development of tubercles, pointed out by Dr. Green? Sir James Clark has found it beneficial in bronchial affections and chronic rheumatism; but it is to be observed that invalids visiting Rome for their health, should observe a course of conduct which is next to impossible in the midst of so many attractions—namely, carefully to avoid all sight-seeing. For the churches, museums, and palaces which one visits for the purpose of seeing the collections of art, are miserably cold and damp, and most admirably contrived as propagators or even originators of disease.

The practice of medicine in the City of Rome has been very much embarrassed; as what useful art or science has not, by the interference

of priesthood? A moment's reflection on the atrocious doctrine of infantile damnation, and the consequently superior value of the life of the child over that of the mother, will at once show the immense number of maternal lives that must have been sacrificed in a city where a bigoted priesthood holds unlimited sway, and how almost impossible it must have been for an intelligent and honest man to have practiced that branch of our art.

A better proof of the blighting effect of this interference is scarcely required, than the fact that in this city of nearly 200,000 inhabitants, which boasts itself the centre of the fine arts, not a single medical periodical is published.

During the French occupation, the hospitals of the city were all united under one general administration, on the plan of the hospital system of Paris. They have, however, since been separated, and are now each of them a distinct institution. Their annual endowments, taken together, amount to about 259,000 scudi, and the number of patients to 4,000—between $\frac{1}{40}$ and $\frac{1}{50}$ of the entire population. The finest of them will serve as a type for them all. This institution is called the San Spirito, (the Holy Ghost;) is of great antiquity, having been founded at the end of the twelfth century. Notwithstanding its immense resources, derived from bequests, following year after year, and century after century, being under ecclesiastical administration, it is heavily encumbered. The fact that its administrators are popularly known, from the splendor and extravagance of their style of living, as "*Il piu gran signore di Roma*," (the greatest lords of Rome,) may perhaps afford a clue to the state of its finances. Its wards are large, unusually well ventilated for those of a European hospital, and unusually clean for those of an Italian. This latter fact is attributable to the judicious management of the Sisters of Charity, under whose immediate care the institution is placed. I was surprised to find that they were not of Roman origin, but introduced here from Paris, by the Princess Doria, after severe opposition by the Pope and higher clergy, on the ground that it would be prejudicial to the *morals* of the *clergy*.

The hospital is divided into three departments—the General Hospital, the Foundling Hospital, and the Lunatic Asylum. The number of beds in the general hospital is 1620. The mean number of patients annually 15,000. The number of deaths $8\frac{1}{3}$ per cent. This small percentage is owing to the fact that an immense number of the cases treated there are intermittent fever and the allied diseases, which may often present themselves several time in the same year, and go out relieved after a short course of quinine.

There is one ward in the institution devoted to clinical lectures, and there is also a small pathological museum connected with it, containing some careful and interesting preparations of the vascular systems, by the great anatomist, Lancisi. The foundling hospital has accommodations for 800. The number of foundlings annually relieved in the city, of whom the greater part come to this institution, is upwards of 3000—a strange comment on the workings of celibacy; and of this number the fearful mortality of 57 per cent. is recorded. The lunatic department numbers 450 inmates, and shows the rather large average, for such an institution, of 11 per cent. of deaths. Cures are comparatively rare. The old system of close restraint and lack of objects to interest and amuse is still pursued, and with its usual bad results.

A glance, however cursory, at the medicine of Rome would not be complete without a passing notice of “*Il santissimo Bambino.*” This is the name given to a miraculous doll, which is preserved with great care and veneration in one of the churches, and of which the following is briefly the history:

A Franciscan monk, returning from a pilgrimage to Jerusalem, amused himself by the way in carving out an image of the Virgin, from a piece of olive wood, which he had obtained on the sacred mount. Now, although he did not know it, Luke, the beloved physician, had had his eye on him ever since he began this pious work; and when the monk, wearied with his journey, one day fell asleep as he sat over his work by the way-side, in the noon-tide heat, the saint popped down from his mansion in the skies, with a paint pot in one hand and a brush in the other, and daubed the little object from head to foot. On awaking, the monk became conscious of what had transpired, and hurried on to Rome with his precious charge.

It was blessed by the Pope, covered with rich clothes, loaded down with jewelry, and it was soon discovered that a portion of the medical talent of its saintly painter had fallen upon it, and that a man “*in articulo mortis*” had but to look upon it to be cured. It very soon became famous, and the list of its cures, perfectly well authenticated by *clerical gentlemen*, soon became infinitely more astonishing than anything that even Jayne’s Family Almanac, or Old Dr. Jacob Townsend’s Sarsaparilla Manual, have startled the world and duped fools with.

It was discovered, too, to possess peculiar efficacy in lying-in cases; and hence, whenever a case of difficult labor presented itself, and the unfortunate woman could afford to pay for the luxury, the most holy doll was called to her bedside, with its train of mumbling priests

And it is a fact which will scarcely be credited, that in this nineteenth century, in the City of Rome, the fees received by this daubed doll are annually greater than those received by the most intelligent and skillful physician. Cases are not wanting where it has been introduced contrary to the express commands of the medical adviser, and death has been the immediate result of so untoward an excitement.

In 1849 it was presented by the Revolutionists with the Pope's state coach, in which it used to pay its professional visits with great pomp. Upon the return of the Pontiff, however, it was of course deprived of this luxurious means of locomotion.

Just outside the city walls, and almost under the shadow of the towering pyramid of Sestus, is the quiet little enclosure where Protestants are accorded the privilege of burying their dead. And here a plain slab of gray stone marks the last resting place of John Bell. During the later years of his life, the great anatomist passed much time in the Italian cities, being devotedly fond of the study of art. His criticisms on works of art, and especially on sculpture, are some of the most learned, sound, and just that have ever been written, and are assigned a very high place in the library of English sculptors.

I know not how more appropriately to close this letter than by transcribing the following from his pen, on that master-piece of art, the "Dying Gladiator." It indicates the scope of his masterly mind, and shows how, not content with being perfectly acquainted with the origin and insertion of muscles, he traced their minutest action, even down to their expression of the emotions of the soul. It is as follows:

"Although not colossal, the proportions are beyond life, perhaps seven feet; and yet, from its symmetry, it does not appear larger than life. The forms are full, round and manly, the visage mournful, the lip yielding to the effect of pain, the eye deepened by despair, the skin of the forehead a little wrinkled, the hair clotted in thick sharp-pointed locks, as if from the sweat of fight and exhausted strength, the body large, the shoulders square, the balance well preserved by the hand on which he rests, the limbs finely rounded, the joints alone are slender and fine—no affectation of anatomy here, not a muscle to be distinguished, yet the general forms perfect as if they were expressed. The only anatomical feature discernible is that of full and turgid veins, yet not ostentatiously obtruded, but seen slightly along the front of the arms and ankles, giving, like the clotted hair, proof of violent exertion.

The singular art of the sculptor is particularly to be discerned in the extended leg; by a less skillful hand the posture might have appeared constrained; but here, true to nature, the limbs are seen gently

yielding, bending from languor, the knee sinking from weakness, and the thigh and ankle-joint pushed out to support it. The forms of the Dying Gladiator are not ideal or exquisite, like the Apollo; it is all nature, all feeling."

BENJAMIN LEE, M. D.

Rupture of an Umbilical Hernia, and escape of a large mass of Intestines—Peritonitis—Opium—Recovery. By REED B. BONTECOU, M.D. Troy, N. Y.

August 9th, 1857—I was called to see Mrs. W. at 10 P.M. Found the patient (a stout, healthy looking woman) lying in bed with her clothes on, her countenance indicating terrible anxiety and suffering. She implored me to do something for her, saying that she had burst; that she was six months pregnant, and that a physician who came to see her about five o'clock, soon after the accident, had pronounced her case as hopeless. I laid bare the abdomen, and found a large mass of intestines and omentum, much swollen and very red, lying by her side on a coarse flannel skirt. They had escaped from the vicinity of the umbilicus, and made a tumor large enough to fill a peck measure. It consisted of nearly all the smaller intestines, with omentum; was covered with gravel adhering to the surface, and felt cold. I administered a grain of morphine immediately, and cleaned the protruding mass as well as the conveniences at hand would allow. On making an attempt to reduce it, I found it so swollen and cedematous as to preclude the possibility of doing so without enlarging the aperture, which I did at once with a probe-pointed bistoury, cutting freely upwards in the mesian line, and returned the whole without further difficulty.

Constant efforts at vomiting made it difficult to retain the parts until sutures were introduced. I pinched firmly together at its base a sac the size of an ordinary orange, including the umbilicus and a rent through which the parts had escaped, and placed four interrupted sutures through it. The flabby sac I then rolled up on itself and made answer the purpose of a compress, keeping it in its place by another compress, a girdle of adhesive plaster, and a bandage of cloth. The uterine tumor was of course apparent, and motion of the foetus was felt. She had been laboring under an umbilical hernia since the birth of her youngest child two years previous, and during the present pregnancy it had increased in size, at times as large as the fist, and the skin covering the sac had for some time previous been tender, as if an abscess was forming in it. The accident occurred to her while

stooping to feed her chickens, at about 5 P.M.; the parts had therefore been protruded five hours when I first saw her.

The pulse was small and frequent, and she was still suffering from the shock of the accident. I gave her ten grains of opium in powder, and left others with directions to give one every two hours till she slept. The frequent large doses were given in anticipation of peritonitis, which I thought inevitable.

August 10th, 8½ A.M.—The patient had not slept, and the powders had been given according to directions, making in all 50 grs. besides the morphine. She was lying on her back, the limbs flexed, breathing easily, and quite free from pain. The vomiting had ceased soon after I left on the previous evening. The pupils were contracted, eyes bright, no drowsiness, tongue moist, was rational, and much terrified with the apprehension of death; had not passed urine, but made no complaint of distress on that account; could not detect any distension of the bladder. I left a number of ten gr. powders of opium; ordered them continued every two hours as before; prohibited much nourishment or drink.

3 P. M.—Is much the same as in the morning; complained of some pain in the lower part of abdomen, and had felt unusual motion of the child; had had no sleep, but attributed her wakefulness to the excitement of many persons running in to see her. She appeared rational, pupil contracted, eyes bright, tongue moist, no vomiting, no great thirst, and no desire for nourishment; pulse 90 and rather small; ordered the ten gr. opium powders continued every two hours as before.

9 P.M.—Patient still wakeful and complaining of pain all over the lower part of the abdomen. She had not passed urine since the accident, and I evacuated it with the catheter. Pulse 100, pupils contracted, eye bright, tongue moist, with thin pale fur, skin moist. Prescribed beef tea as nourishment, and 15 grs. pulv. opium every two hours till pain was subdued and sleep obtained. She was rational and composed.

11th, 9 A. M.—Patient still wakeful, quite easy, rational, and inclined to be cheerful. Since 5 A.M. had been vomiting a clear watery fluid without nausea. The powders had been given as prescribed, and had not been rejected. She was somewhat annoyed with motion of the fœtus. Had her clothes changed for the first time since the accident; pulse about 90; in other respects in much the same condition as on the evening previous. Prescribed ½ minim of creasote in bread-crumbs pill for the vomiting, and to continue the 15 gr. powder of opium every two hours.

8 P.M.—Patient had not yet slept, though the house had been kept quiet; was quite comfortable, having suffered little pain except in the wound; was unable to extend the limbs; the lower part of the abdomen distended and tympanitic; had passed urine, ordered hot fomentations sprinkled with spts. turpentine, to lower part of the bowels, and a dose of oil and turpentine internally as a laxative. Prescribed ten grs. opium every three hours till sleep was obtained, and oftener if in much pain.

12th, 10 A.M.—Patient had slept 3 hours, and was sweating profusely; had passed some urine, but the bowels had not moved; the abdomen was greatly distended and tympanitic, causing pain in the wound and over the belly generally. I loosened the bandage and adhesive girth. She spoke of having felt much motion of the fœtus. Ordered oat meal gruel and beef tea as nourishment. Prescribed salts $\frac{z}{ss}$. to be taken at once, and to use an enema in four hours; to continue the ten-grain opium powder, and use the fomentations as before; the vomiting had ceased.

Before evening her husband came for me, saying she was terribly bloated and suffering more pain, notwithstanding the powders had been given every two hours. I saw her about 7 P.M. She had had three profuse, thin, watery evacuations from the bowels, and was much relieved of the distension and pain. She was rational and bright; skin moist, pupil contracted, pulse 100.

13th, 9 A.M.—Patient sleeping; soon awoke and conversed cheerfully, expressing much gratitude for my services; had slept much during the night; was quite free from pain, and could extend the limbs a little; very tired of the bed, and wanted permission to get up; pulse 90; skin moist; eyes bright; tongue coated but moist; some appetite; allowed roast oysters, and prescribed 5 grs. opium in powder every four hours.

14th, 10 A.M.—Had slept most of the night; felt well, except pain and soreness in the wound; pulse 82. I dressed the wound for the first time, now five days since the operation. Found considerable swelling of the parts about the sutures, and withdrew them. The walls of the sac were apparently adherent, and I left it rolled up on itself as it had been; covered the whole with lint, spread with simple cerate, and an adhesive girth about the body. Prescribed a continuance of the 5 gr. powder of opium every four or five hours. She continued to improve, till twelve days from the time of the accident, when she aborted *at* or *about* the sixth month. I continued to administer opium, 15 or 20 grs. daily, occasionally combining with it acetat. plumbi

or tannin, or both, to correct a tendency to diarrhœa, which annoyed her after the miscarriage. I continued my visits *daily* till the 1st of September; after that *occasionally* for three weeks, during which time I gave opium largely. It was some weeks before she could extend her limbs sufficiently to stand erect.

This person has since given birth to a healthy child, and is herself robust.

The hernia, I may mention, never appeared after the operation.

PROCEEDINGS OF SOCIETIES.

Academy of Medicine. Regular Meeting, Oct. 1858, DR. S. C. FOSTER, Vice-President, in the Chair.

Discussion on Puerperal Fever—(continued.)

Dr. Barker said: One year ago this evening I had the honor of offering to the Academy some remarks on the pathology and therapeutics of puerperal fever. Since that time this body has been mainly engrossed, during four of its sessions, by the consideration of this important subject. The Academy of Medicine in Paris have also been engaged in a most zealous discussion of the same subject for many months past, in which MM. Beau, Cazeaux, Cruveilhier, Danyau, Depaul, Dubois, Guerin, Hervez de Chégoin, Trousseau, Velpeau, and others have participated, a list of names comprising the first talent of that body. Many articles have also appeared in the French medical press, among which I should mention as specially valuable, those by M. Jacquemier, in the *Gazette Hebdomadaire*, and those by M. Behier, in *L'Union Médicale*.

I may also add, that during the last twelve months, my practical experience in this disease has been greatly enlarged both in hospital and in private practice, as we have not only had the misfortune of encountering it in the Lying-in Wards of Bellevue Hospital, but it has also been unusually rife in this city. From October, 1857, to October, 1858, one hundred and seventy-three deaths from puerperal fever have been reported at the City Inspector's office.

The following table gives the deaths from puerperal fever for each month, and it is interesting to note the parallelism between the deaths from this disease and erysipelas:

Disease.	Oct. 1857	Nov 1857	Dec 1857	Jan. 1858	Feb. 1858	Mar. 1858	Apr. 1858	May 1858	June 1858	July 1858	Aug 1858	Sept 1858
Puerperal Fever,.	5	9	14	17	26	21	21	19	13	13	9	6
Erysipelas,.....	4	6	16	13	20	14	23	21	8	13	5	3

In Paris there has certainly been afforded an immense field for studying this disease, as in five years, 1852-56, 644 deaths have occurred, in six of the principal hospitals, from puerperal fever.

I may be pardoned for saying, that I have most carefully and conscientiously read all that has appeared in the French medical journals, and that I have observed, with the most earnest desire for truth, in order that I might correct any error in reasoning or deduction, into which I may have previously fallen.

Before alluding to some points, in regard to the pathology of this affection, I will give a very brief summary of the views of the principal speakers in the French Academy. The discussion originated with M. Guerard, who stated his belief, that so far as the nature of the disease was concerned, we must look for something beyond the mere local lesions, and that its phenomena cannot be explained by means of purulent infection. M. Depaul was the most able advocate of the doctrine of the essentiality of puerperal fever, although, instead of the term puerperal fever, he would prefer calling it puerperal typhus, or puerperal septicæmia. He believes that its essential character consists in a primary alteration in the blood.

In the autopsies which he has made, he has uniformly found the blood in this disease to possess a peculiar fluidity, and to be generally of a violet red color, easily impregnating and coloring the tissues. It often also presents a remarkably oily appearance, and coagulates with difficulty. He quotes from Vogel, (in Virchow's Handbuch,) who states that lactic acid confers an acidity upon the blood in this disease, and that in some cases carbonate of ammonia, in others the hydrosulphate, is found in it. The fluid loses its aptitude for coagulation, as do the globules to redden on the contact of air, and therefore their fitness for the respiratory act. The globules are in part decomposed and dissolved in the serum, giving it a reddish or dirty brown color. Scanzoni asserts that in some cases there is an increase of fibrin; in others, a true pyæmia, the constituent elements continuing in their normal proportions, and in others, again, a true putrefactive dissolution or septicæmia. M. Depaul regards the epidemic occurrence of this disease as presumptive proof of its essentiality. He, also, as do several of the

other speakers in the French Academy, refers to the fact, that the lesions of the solids are of the most varying character, and that in some fatal cases these do not exist at all, nothing being appreciable, save alterations in the blood. M. Beau considers puerperal fever as due to local inflammation (most frequently of the peritoneum,) united to an inflammatory diathesis depending upon an alteration of the blood—this alteration being an increase of the fibrin, a characteristic of inflammation. In the opinion of M. Piorry, the disease in question is primarily a metritis phlebitis or peritonitis, septicæmia or pyæmia. M. Caseaux also believes that it belongs to the phlegmasiæ. Jacquemier, Legroux, and Behier hold similar views. M. Bouillaud considers it due to purulent or putrid infection with an inflammatory element. Velpeau holds that it is a metro-peritonitis, a lymphangitis, or phlebitis (purulent infection,) modified by the puerperal state. Trousseau considers it as a phlegmasia of a peculiar kind due to a specific cause. Hervez de Chégoin sees in puerperal fever only the results of purulent or putrid infection. Dubois, Depaul, Danyau, and Guérard were the only members of the French Academy who advocated the opinion that puerperal fever is an essential disease, not dependent at all upon local inflammation. M. Cruveilhier considers this disease as both a fever and an inflammation, and expresses his opinion in nearly the same words as Dr. Clark used in this Academy six months before. In common also with Dr. Clark, he regards the anatomical lesions as an essential feature in the disease. The following are his conclusions:

1. Puerperal fever is essentially a traumatic fever.
2. The special conditions in which the uterine and the entire organism of the woman who has just been in labor constitutes what may be called puerperal traumatism.
3. The essential anatomical characters of puerperal fever are peritonitis, sub-peritonitis, or purulent lymphangitis. Purulent uterine phlebitis is incomparably more rare than suppurative lymphangitis.
4. It is extremely probable that purulent inflammation of the lymphatic vessels is a cause of the intoxication of the blood in puerperal fever—but this intoxication does not manifest itself by visceral abscesses, as happens in purulent phlebitis.
5. The possibility of purulent infection of the blood by suppurative lymphangitis is not decided in a positive manner.

Now I do not propose to go over the ground of my former remarks, and give my reasons for believing that puerperal fever is an idiopathic fever, which originates from a poisoned state of the blood, and that the quasi inflammatory processes which generally occur in this disease are

in reality the results of poison, stirring up its peculiar excitement wherever it finds the proper amount of combined irritation and exhaustion to insure it a nidus, just as the poison of typhus fever awakens its pseudo-inflammations in the intestines, the lungs, and the brain. I will only express my belief parenthetically, that the lesions commonly found in puerperal fever are not due at all to inflammation, but to a pathological process entirely dissimilar and in many respects antagonistic to inflammation.

The whole doctrine of inflammation is now in a transition state. Whether the essential characteristics of inflammation be, as Professor Bennett says, an exudation of the normal liquor sanguinis, or in the words of Professor Alison, inflammation is altered nutrition, it seems to me that the lesions found in puerperal fever, indicating destructive disorganization, are of an entirely different character. I should not allude to this point were it not for a strong conviction that pathological errors in these particulars have led to grave therapeutical errors. There has been one striking difference between the discussion in the Academy of France and this body, and that is, that in the former the great majority who have spoken have advocated the doctrine that the phenomena characteristic of puerperal fever are the results of a local phlegmasia, while this view has not found a single advocate here. Holding the views I do, I must regard this as a matter of mutual congratulation. But there is another point which has not only an important bearing on this question, but on general pathology, and is equally interesting to the obstetrician, the surgeon, and the physician, on which I beg leave to dwell for a few moments—and that is the question of purulent or putrid infection, or of pyæmia and of septicæmia.

As regards this subject, there is a great harmony of view between one of our members, who has taken the most prominent part in this discussion, and several of the distinguished speakers in the French Academy. In order that I may do full justice to Dr. Clark, I quote from the *New York Journal of Medicine*. Dr. Clark said, "It was his object, on a former occasion, to show that these cases" (the cases which, in the belief of Simpson, Gooch, and others, were without lesion of any kind—a simple fever, the poison of which overwhelmed the vital powers,) "were no exceptions to the general rule, but that they were really marked by inflammation, like the others, but that the inflammation was one that had escaped detection; that it was an endometritis, and that the inflammation affecting the inner surface of the uterus involved the open or valvular mouths of the uterine veins, and might produce purulent contamination of the system, while no pus was found

in the veins themselves after death. The evidence of this was in the inflammatory exudation on the inside of the surface of the uterus; the redness of the uterine structure, penetrating a minute distance from within outward; the symptoms of pyæmia and the discovery of pus in distant organs. To present this idea was the chief object of his former remarks, and to give it distinctness he had referred to and recognized the then commonly described inflammatory lesions, viz., the peritonitis, the purulent phlebitis in the uterine sinuses, and the purulent inflammation of the uterine lymphatics. These, together with endometritis, he had stated were the primary *inflammatory* lesions, and that there were other organs subject to inflammation in a subordinate and secondary degree." In another place he asks, "whether the shortest time" (in which the most malignant form of puerperal fever destroys life) "is not long enough for endometritis to produce fatal contamination of the blood? or, in other words, in what time purulent infection can overwhelm the vital forces?" After giving a condensed summary of the experiments of Sedillot, in injecting laudable and foetid pus into the veins of dogs, Dr. Clark remarks, "the import of these experiments, and their relation to the disease we are considering, hardly require comment, especially when it is remembered that the uterine cavity is open to the ready access of air; that when inflammation is recognized on its inner surface, it has often been of a character most likely to furnish a septic agent, healthy or degenerated pus, in an augmented, and consequently accumulated stream." These extracts show the importance with which Dr. Clark regards purulent contamination and putrid infection in developing the phenomena of puerperal fever. In the French Academy, M. Velpeau endeavored to prove that it results from purulent infection, and Hervez de Chégoin, that it is due to putrid infection. In my former remarks I expressed a doubt whether pus, the product of simple ordinary inflammation, if absorbed or washed into the circulating blood, will produce the symptoms which we call pyæmia, or whether, in fact, another element besides laudable pus is not essential for the production of these phenomena. As to the effects of putrid pus when mingled with the circulation, there is no doubt, for this has been demonstrated by the experiments of numerous competent observers. But with Dubois, I hold that neither purulent contamination nor putrid infection have anything to do with the development of the disease, but that it results from a special poison of the blood, the essence of which is unknown, but the effects of which are very manifest. I believe this to be true of all that class of cases called pyæmia, whether puerperal, traumatic, or idiopathic, and that the

extensive and disseminated suppuration are a result of this poison, and not a cause of the disease. The doctrine generally accepted, is, that purulent contamination originates in a phlebitis. Now, simple phlebitis alone is not a disease of great severity. It is often met with wherever there is a traumatic injury or solution of continuity, and it may involve the whole extent of a limb without any great danger, and very rarely has a fatal termination. But sometimes comparatively trivial causes, very slight injuries, are followed by a train of symptoms, the aggregate of which constitute pyæmia, and terminate fatally. Trousseau mentions, that at the Hôpital Clinique, in the service of M. Cloquet, four patients died after the following slight operations, one resulting from forced catheterism, another from depressing a cataract, a third from a slight incision for fissure of the anus, and the fourth was a woman who had a slight incision made in the arm for the extraction of a needle.

Puerperal fever was prevailing in the hospital at this time in the service of M. Dubois. Parallel facts have long been observed by surgeons, and I think I may safely refer to the surgical members of this body to confirm the statement, that during the past winter and spring there has been an unusual tendency to the development of pyæmia. How can such cases as the above be explained by the doctrine of purulent contamination? It is a matter of common observation that large abscesses are absorbed and eliminated without occasioning so-called purulent infection. Dr. Bennett relates a very interesting case of pyæmia, terminating fatally, following acute articular rheumatism. Pus was found in the head, the chest, and the joints. There was no phlebitis. Dr. Watson, in his lectures, relates two cases, in which the autopsic results were strikingly like this, but the constitutional disease was preceded by otorrhea and abscess in the ear. Pyæmia is a very rare and exceptional result of the traumatic lesions above mentioned, and equally or more so of the diseases referred to, viz., acute articular rheumatism and otorrhea. Neither is it one of the natural terminations of endometritis, uterine phlebitis, or suppurative inflammation of the uterine lymphatics, nor is there any reason for believing that these diseases are liable, when not associated with some other morbid element, to produce fatal contamination of the blood. I cannot, therefore, see what bearing the anatomical structure of the uterine sinuses, on which Dr. Clark laid so much stress in his remarks on the first evening in which he discussed this subject, has upon puerperal fever. Even if those cases described by Gooch, Locock, Simpson, and others, as without lesion, were cases of pyæmia, it does not follow that the pyæ-

mia had its source in the inflammation of the inner surface of the uterus. If the more careful and microscopic examination of modern times had been able to reveal the existence of pus in minute quantities in the uterine sinuses, it does not follow that this pus was the source of the fatal contamination of the blood. It must be remembered that these sinuses constitute a special vascular apparatus, pertaining to the utero-placental circulation, and disappearing when complete involution of the uterus has taken place. Admitting, then, the doctrine of purulent contamination as ordinarily received, pus found in these uterine sinuses must have a very trivial influence on the general system as compared with pus found in the crural, the ovaric, or the iliac veins. Furthermore, microscopic investigations have proved, as Trousseau asserted, and Dr. Clark the other evening admitted, that the absorption of pus is a physical impossibility, the pus globules being larger than the calibre of the capillaries. In the cases of absorption and elimination of the pus of large abscesses before alluded to, the pus corpuscles must first be disintegrated and reduced to a fluid condition. The doctrine of putrid infection is equally untenable. If the retention of a certain quantity of liquid or coagulated blood can produce toxæmia and the effects supposed to be due to this, then a natural, constant, and inoffensive condition would be converted into a permanent and formidable danger, for there is no hæmorrhage attending labor which is not followed by putrid infection, as there are always some clots retained and altered in the genital passages. These are briefly my reasons for rejecting the doctrine of purulent contamination as the source of puerperal fever. I do not, however, wish to be understood as asserting that there are no cases of putrid infection which destroy the life of the puerperal woman, for the contrary is my belief. It does sometimes occur from the retention of a portion of the placenta, or of clots which are decomposed within the cavity of the uterus, and in some rare instances from gangrene of the internal surface of the uterus. One case of the latter occurred in my service at Bellevue Hospital. But these cases are quite distinct from puerperal fever, and the differential diagnosis is very easily made out. No one practically familiar with puerperal fever as an epidemic or a sporadic disease, would confound them. In putrid infection the chills are very slight, and recur irregularly and frequently. The tongue is dry and cracked, the teeth and lips are covered with sordes, the countenance exhibits a peculiarly haggard and frightened expression, and hectic fever and colliquative diarrhœa appear at an early period. There is also usually marked subsultus, insomnia, muttering delirium, and abdominal meteorism without pain.

The lochial discharge is always extremely offensive. It sometimes is absent, but when this happens, a vaginal examination will give unmistakable proof of the odor of putrescence.

Any or all of the above symptoms may be absent in puerperal fever, and they are never found combined in them entirely. The lochia, for example, is sometimes suppressed suddenly without producing any symptoms, or it may continue unchanged in quality or quantity. It may, to be sure, be very offensive, but this is unattended with the symptoms above enumerated as pertaining to putrid infection.

Puerperal fever, then, is something more and something different from purulent contamination or putrid infection. It is a constitutional disease, primarily acting on the blood. To parody the words of Dr. Meigs, "the constitutional affection leads the train, and brings on the topical lesions after an indispensable preliminary incubation." There is a uniformity and constancy in its symptoms which bears no relation to its local lesions, which are infinitely varied, and in some well-authenticated cases no palpable lesions have been found. If they existed, they were too trivial to explain the severity, and intensity, and rapid progress of the constitutional reaction. Pus is found in the veins, the uterine tissue, the lymphatics, the peritoneum, the pleura, the pericardium, the articulations, the muscles, and the cellular, and even the epidermic tissue. M. Charrier describes one epidemic at the Hôpital Lariboisiere, in which the first half were characterized by the peritoneal lesion, in the second half lesions of the pleura were the uniform rule, and it was rare that lesions were found of any of the organs specially associated with parturition. Each epidemic has its special characteristic as regards the topical lesions. M. Dubois observed one epidemic, in which all who died were found to have perforation of the intestines. M. Danyau, in another epidemic in 1829, found a constant alteration of the mucous membrane of the large intestine in its whole extent, the lesion being a solution of continuity, as if made by a punch. A careful study of the history of the numerous epidemics which have been described, proves that the variety of local lesions predominating in each is exceedingly great, while there has been sufficient uniformity in the symptoms, as a whole, to characterize it as being different manifestations of the same disease.

I now pass to a consideration of the therapeutics of this disease. This is the cardinal end of the study of all diseases. The discussion in the Academy of France has been utterly fruitless as regards this point, as they have added literally nothing to our knowledge of the proper mode of treating puerperal fever. In this respect I think it is not too

much to say, that the discussion in this body contrasts most favorably with that of our foreign namesake. The heroic use of opium and its preparations, in that variety of puerperal fever characterized by the peritoneal lesion, first signalized by Dr. Clark, and the use of the *veratrum viride* as an arterial sedative, has and will, I do not hesitate to say, diminished the fatality of this terrible disease by a marked percentage.

Most of the French speakers distinctly avow their skepticism as to the value of any treatment for the cure of puerperal fever. The exceptions are M. Depaul, who has found his most favorable results from the free use of mercurials; M. Velpeau, who has strong faith in the value of mercurial inunctions; and M. Beau, who is enthusiastic in his encomiums in regard to the value and importance of the sulphate of quinine in the treatment of this disease.

Now it seems to me that each school of the French—those who have advocated the essentiality of the disease, and those who consider the fever as symptomatic of local inflammation—have equally failed in their therapeutic efforts for obvious reasons. The first have apparently been seeking for some specific in puerperal fever, some antidote for the blood poison, which they would use in an analogous way with the use of the hydrated peroxide of iron in poisoning from arsenic, while the other school are vainly seeking some antiphlogistic course which will overwhelm the inflammatory action. Now there are no specific therapeutics for puerperal fever, any more than there is in yellow fever or in typhus fever. The type of the disease varies to an extraordinary degree in different epidemics. Sporadic cases require very different management from epidemic cases, and the constitution of different individuals attacked, and the tolerance of diseases, differs to a still more extraordinary extent. There is no disease which requires such acute discrimination in the adaptation of means to an end, none which requires a sounder judgment or more incessant watching to combat every assault which exhausts vital power.

On a former occasion, I very briefly alluded to the principal indications in the treatment of this disease. I propose now to examine more in detail the agencies we have the control of in fulfilling these indications. The first indication is to eliminate from the system as much of the morbid poison as possible, by means of depletion and the other evacuants, as purgatives, emetics, diuretics, etc. I said that unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled, except to a limited degree. The effects of the poison are developed so rapidly, that the patient will not bear the use

of such means, and it is the effects that we are obliged to combat. Within the past year I have twice resorted to venesection in puerperal fever with most satisfactory results. Both patients were young and plethoric, and the toxæmic influence was strikingly evident in producing great cerebral disturbance. I bled for the same reason that I would bleed similar subjects in uremic convulsion. I would here incidentally suggest the inquiry, whether the type of disease is not again becoming more sthenic, or whether there has not been an epidemic tendency to cerebral congestion. Within the past twelve months I have bled thirteen pregnant or parturient women—more in the aggregate than I have bled for the seven years before. I may also add that I believe I have had authentic accounts of the death of twenty-one from this cause in the same period of time. I will add nothing to my former remarks in regard to venesection in puerperal fever.

Purgatives I have rarely used in this disease, for I have regarded tympanites as a contra-indication for their use, and in many cases there has been a remarked tendency to diarrhœa, which sometimes has been difficult to control. In some few cases, where there was evident obstruction of the portal circulation, or there was reason to believe that there was intestinal irritation from previous constipation, I have given an active cathartic of calomel, rhubarb and nux vomica. In a later stage of the disease also, when the patient has been supported by a liberal use of beef tea and alcoholic stimulants for some days, there sometimes comes a period when the digestive apparatus refuses to take up what is put in the stomach, a mercurial laxative has had a most happy effect in unloading the portal system, and relieving the congestion of the capillary circulation of the mucous membrane of the alimentary canal, and the patient at once is able to assimilate what is taken into the stomach.

Emetics were at one period regarded as a specific for puerperal fever, but now they are rarely used. In three cases I have decided on their use. The disease was ushered in by recurring chills, nausea and bilious vomiting, with a marked icterode hue of the skin and conjunctiva. The agent selected was the Turpeth mineral in five-grain doses, which acts very promptly without producing prostration. But, on the contrary, in these cases they professed to feel less weakness after vomiting, and the symptoms which induced the selection of an emetic were at once relieved.

The second indication mentioned was to control the vital disturbances resulting from reaction. These are principally vascular excitement and nervous irritation. The value of *veratrum viride* in reducing vascular

excitement has in this disease been confirmed by many observers in this city, and my own additional experience. It will most surely reduce the quickened pulse of inflammation and irritation. Its use is not incompatible with that of stimulants. Experience has abundantly demonstrated the truth of this apparent paradox. One patient who recovered took, every hour for two days, one ounce of brandy and three to ten drops of the tinc. *veratrum viride*, the quantity of the latter being determined by the frequency of the pulse, which was never allowed to rise above 80 per minute, although it sometimes fell down to 40. In another case the *veratrum viride* did not seem to produce any effect on the pulse, which remained steadily above 130, until the condition of the patient was such that I decided to give brandy. After the first ounce was given, it fell to 108; after the second, to 86. Continuing the brandy, the *veratrum viride* was suspended for a few hours, and the pulse again rose to 130. After this it was curious to note the fact, that if either agent was suspended the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute. I have little to add to what has already been said on the use of opium in puerperal fever. In all cases it should be given to the extent of entirely subduing the pain. When the peritoneal lesion predominates, it is the principal agent on which we must rely, and the quantity in which it is to be administered is only to be determined by the effect which it produces.

Third, to combat the local secondary lesions which may be developed. This indication implies the use of a great variety of means, which will often tax the resources of the medical attendant to the utmost. I have already spoken of the value of opium in the peritoneal lesion. The tympanitis is often the most striking and distressing symptom, and I regret to say that I know of no treatment by which we can always be sure of relieving it. I rely, however, mostly on the use of turpentine, internally and endemically. In some cases I have seen good results from the use of the acetate of lead, and in others I have seen all means fail. In those cases where the secondary lesions are developed in the uterus, its veins, or its lymphatics, I have seen no advantage from leeching or blistering. The exposure of the abdomen to the air more than counterbalances the problematical advantages resulting from the former, while the latter only adds to the nervous irritation already existing. In these cases, the only local treatment I make use of is chlorinated vaginal injections repeated several times a day, and hot linseed meal poultices kept constantly applied over the hypogastrium.

Fourth, to sustain the vital powers of the system. I believe more

patients die from the neglect of this point than from any other error of treatment in this disease. The patient is often sacrificed by a contest between the doctor and the disease, both contributing to exhaust the vital powers. In very many cases remedies are utterly powerless in combating the disease, and the province of the physician is to keep the patient alive until the disease is exhausted. This can only be done by proper nutrition, and the prevention of waste, and the restoration of nerve power by the use of alcoholic stimulants. I will not enlarge upon this point; but I still believe that when a patient with puerperal fever has lived for forty-eight hours, there is a constant encouragement for effort, and that the danger is in a certain sense diminished in proportion to the duration of the disease. I will only allude to two points of practice which seem to me of some importance. The first I have already mentioned—the value of a mercurial laxative when the patient has been supported for some days by the liberal use of beef tea and alcoholic stimulants, until the stomach loses the power of taking care of what is put into it, apparently from obstruction of the circulation and congestion of the capillary circulation of the mucous membrane of the alimentary canal.

There is another class of cases where the stomach seems to give out all at once from another cause, which I will not undertake to explain. Everything is rejected in a few minutes after it is swallowed, with a painful feeling of burning and excoriation. Now, if the condition is not changed the patient will soon die, as she can no longer be sustained. I have in several instances been able to persuade the stomach to resume its functions, by adding to each tablespoonful of beef tea one drop of nitro-muriatic acid, the proportion of the mixture being one part of the nitric and two of the hydrochloric acid. I will no longer ask the attention of the Academy, but will conclude with the expression of the hope that other members will give us the benefit of their clinical experience.

DR. GARDNER then made the following remarks:

MR. PRESIDENT—In common, I doubt not, with you and the members of the Academy generally, I have listened with great satisfaction to the Professors Smith, Clark, and Barker, in their full and lucid statements respecting the etiology, pathology and therapeutics of puerperal fever; I have read, too, the full resumé of kindred debates upon this same subject at the meetings of our illustrious namesake, the Academy of Medicine at Paris; and I may, perhaps, be pardoned *here*, Mr. President, if I state that I have felt no little access of national

pride in instituting a comparison between these debates ; for here the anatomical facts and the pathological deductions of Prof. Clark, and also his heroic opium treatment, and the more novel treatment of Prof. Barker with the *veratrum viride*, have at least added something to the sum of knowledge on these points, given us food for thought, and a stand-point (even if a little boggy and uncertain) from which to start for fresh investigations in a somewhat different direction from that which we have been following. The debates of the French Academy have been truly flat, stale, and unprofitable, without a new point made, unless I include the mention there of the opium and *veratrum viride* treatments.

Still, Mr. President, it seems to me, that even when so much has been done, more might still be effected, and I venture to intrude my few remarks upon the attention of the Academy, not with the expectation of personally adding to the common fund, but in hopes by drawing attention to another side of the question, to elicit new opinions, perhaps, upon old matters. We have heard but little said of the treatment of puerperal fever, except by new methods. Puerperal fever is no new disease; it dates far back in time, for we have monographs upon this subject dated as early as 1659, by Willis, Hake, and Berger. In 1746 puerperal fever prevailed in Paris, chiefly at Hotel Dieu, where scarcely any recovered from it, as might be supposed by any one who has ever seen the ill-ventilated wards of this renowned hospital. The post-mortem examinations there revealed large amounts of albuminous exudations in the peritoneal cavity, appearing like coagulated milk on the surface of the intestines, with a copious effusion of whey or milk-like serum; wherefore effusion was viewed as a metastasis of milk, and hence it was for a time considered as milk-fever, although a closer attention would have shown that the milk is rarely entirely arrested.

But, as I was proceeding to remark, little has been said in this Academy respecting the treatment of this disease, except to suggest novel methods of treatment. It cannot be possible that there is nothing good in the prophylaxis and therapeutics in general use for the last two centuries! The results may not have been what is desired, but certainly there must be something good in it all! For my part, I do not believe in the opium treatment or the *veratrum viride* treatment as treatments, while I am willing to accord to both of these powerful remedies a place in the list of medicaments appropriate to some of the ever-changing symptoms of this, in certain situations, very fatal disease. I see in opium a powerful narcotic, efficient in relieving the

intense pain often present, and for this I would administer it till the pain is overcome, even if compelled to exceed the immense doses which Dr. Clark, as well as Dr. McNulty in his paper on opium lately read here, has proved the human constitution is able to safely withstand. I see in both opium and veratrum viride an agent effectual in calming the vascular excitement, but not to cure the *cause* of this excitement, for this is still found to be present when the calming potion is removed. Veratrum viride I am ready to give experimentally, empirically, but not with any idea of its specific qualities, as a curative agent. They both act as palliative to inflammatory symptoms; they serve to remove the *vis a tergo*, to restrain the action of the heart from sending more blood to the already gorged and diseased tissues.

For specific remedies I am compelled to stick to the old treatment, notwithstanding my dissatisfaction with it—my unwillingness to follow a course that will not save *every* patient. I am obliged to hold on to it until something better is offered for my adoption. Calomel is the only reliable sheet anchor that I have found. It is the mercurial only that will defibrinate the blood, when the inflammatory symptoms are the most serious. It is the mercurial alone that is powerful to eliminate the subtle *materies morbi* in those less fearful looking, but more dangerous forms of this disorder where the springs of life are destroyed by secret and hidden disease, traced by Dr. Clark to its lurking places in the obscure ampullæ of the internal uterine sinuses. Theoretically, calomel is the remedy demanded; no medicine acts so efficaciously upon all inflammatory affections of all serous membranes, whether it be of the brain, the lungs, or the peritoneum; no medicine more surely destroys morbid poisons than the mercurial; no treatment is more potent to diminish the abnormal plastic elements of the blood, or to restore the hyperæmic tissues and organs to their proper, healthy condition. Still I do not consider that calomel is a positive agent. As in scarlatina, the invasion of the disease is sometimes signalized by such terrific aggravation of every and all symptoms united, that before the system can be brought under the influence of any form of treatment the patient is lost—so intense occasionally become the inflammatory symptoms, that the most vigorous treatment will not overcome them; for I have seen women after several days' sickness die, when profusely salivated—a fact denied by some, but which I have seen, though in but one instance that I can recall with distinctness.

The mercurial treatment, then, is in no wise to be neglected; combining, as may be necessary, opium, or the veratrum viride, to any de-

sired extent, yet remembering that in so doing you are administering no curative agent; that the opium but imitates the treatment of the surgeon, who applies splints to a broken leg, producing quiescence and relieving pain—the puerperal poison is still there, and till that is eliminated, you have only made your patient comfortable, and perhaps but soothed her passage to the grave.

But before any action can be expected from mercurials, there is time and occasion for other treatment. The disease sometimes is apparent before or during parturition. In the case of a woman whom I delivered by craniotomy, after several days' labor, there was no subsidence of the abdomen after the removal of the child, weighing $8\frac{1}{2}$ lbs., and the secundines, but it remained tumid, tympanitic, and the woman was finally enumerated as one of the unsuccessful of Dr. Clark's cases of treatment by opium; the woman dying of hæmorrhage on the sixth day after.

Topical depletion, when severe inflammatory symptoms are present, I have great faith in. Forty or sixty leeches upon the abdomen, with perhaps a repetition of half that number in from 12 to 48 hours, I have known beneficial, but I have no faith in general bleedings to any amount, or in the application of ten or twenty leeches. If any benefit is to be derived from them, they must be sufficiently numerous, if not to overwhelm the disease, at least to markedly affect it.

I attach more importance to turpentine than to any remedy after calomel. What the extent of its therapeutical powers may be I am not prepared to fully define. I believe them to be very great, and very little appreciated by the profession. In one case of ruptured uterus, I consider the life was saved by application of this agent alone. Whether administered by the mouth with the yolk of an egg in ten minim doses every hour, or applied constantly for forty-eight or seventy-two hours to the abdomen, or internally and externally united, I have seen results forcing me to believe in its specific properties.

The secondary affections, the results of pyæmia, are not peculiar to puerperal fever, and need not be especially considered in this category.

Considering it both desirable and becoming that all who have any especial interest or experience in this class of diseases should lay their views before the Academy, I have offered these few remarks.

New York Pathological Society. Regular Meeting, April 14, 1858.
E. HARRIS, M.D., *Vice-President*, in the Chair.

[Reported for the MONTHLY, by E. LEE JONES, M.D., Secretary.]

Ulceration of Appendix Vermiformis.—DR. D. S. CONANT presented a specimen of ulceration of the appendix vermiformis removed from a young man, student in the Medical College, Brunswick, Maine. Shortly after eating a piece of mince pie he was seized with colic, which lasted several hours. The next morning, Wednesday, he was called to see him, and found him suffering a great deal of pain in the abdomen. He ordered opium to quiet the pain. He was better in the course of an hour or two, and improved until Saturday, when he had a very severe chill, and three or four chills every day after. His pulse was only 75 or 80; had very little, if any, fever; his mind was perfectly clear, he only felt a little weak. This state of things went on for three weeks, when about the middle of one Saturday night he commenced sinking, and complained of some slight pain in the right iliac region. Attention being directed to that region, it was examined thoroughly, and a little dullness on percussion was discovered, just above the crest of the ilium on the right side, extending almost down to the pubis. From this it was concluded that there was an abscess forming at that spot. He continued to sink until the Tuesday morning following, when he died.

Autopsy.—Abdominal cavity perfectly healthy until we came to the right iliac region—very little plasma upon the peritoneum at that spot. Behind the cæcum there was an opening three-quarters of an inch in diameter, which opened through into the peritoneum, and led into a large cavity, holding a pint of blood clots between the bladder and rectum. The appendix vermiformis was found destroyed, or ulcerated off, close to the cæcum. Here is seen a small portion of the upper wall of the abscess, as well as the opening into the head of cæcum. In the lower cavity was found a bean, right over the ant. crural nerve.

Perforation of Appendix Vermiformis—Peritonitis.—DR. G. T. ELLIOT, Jr., presented an instance of perforation of the appendix vermiformis.

It occurred in a patient eleven years of age. It is interesting from the nature of the treatment, which consisted particularly in the exhibition of opium. The patient was a very healthy active lad, notwithstanding his puny appearance; had never before been sick. He got up on Wednesday morning last, feeling rather unwell, so much so that the domestics remarked it. He went out as usual in the morning, but while at play with his companions received a blow in the stomach, that rendered him breathless for a time. That day he hurried

through his dinner, which was a simple one; he soon after, however, vomited it up, and then pain came on. Various domestic remedies were resorted to, but with no good effect; and the night of the next day, the pain increasing, I was sent for, and found him with an anxious expression of face; very rapid pulse; respiration thoracic; complaining of pain, which was paroxysmal, over all the abdomen. He had been at the gymnasium lately. Hernia was suspected, but none found; administered a dose of oil, stating that I would call again in the course of two or three hours. The oil operated before I returned, three times. The last two passages were attended by a great deal of pain, and inability to make any voluntary effort. He was afterwards carried, helpless, to bed. Convinced that peritonitis existed, a teaspoonful of paregoric, and six leeches over the abdomen, were ordered. Dr. Clark was called in consultation, and confirmed the diagnosis. The application of the six leeches relieved him very much indeed; before, he could not assume the ordinary position—now, he was able to stretch himself out in bed. His pulse had fallen 10 beats, and his general expression was entirely for the better. The opium plan of treatment was resolved upon, and carried out pretty effectually. During the night I decided to give solid opium, thinking, perhaps, by so doing the stomach would be less irritable. Gave him opium enough to induce sleep through the whole night, and when he woke up he felt better. After Dr. Clark left, he had to assume the position common in peritonitis, thighs flexed upon the pelvis; he still maintained that position. During the next day the treatment was steadily pursued, and in the evening Dr. Clark saw him with me again. His respiration, which had been 30 before, now fell; his pulse also. Tenderness of abdomen not so much complained of as before. Auscultation detected no movements of the intestines. He passed his water with difficulty; sometimes, after waiting a time, with comparative ease. There was then no tympanitis or tension of the abdomen. We decided to substitute laudanum for the solid opium that night. We gave the beef tea, at least it was endeavored to be given by the tablespoonful every hour during the night. He had only drinks before that. On Friday night a blister, 3x4, was directed to be placed over the abdomen. Laudanum was steadily given in such quantity as to free him from pain, and allow him to sleep comfortably. When he was awakened his intellect was perfectly clear and fresh. He went on in this way till Saturday without any marked change—if any, he was better. On Saturday evening his respiration was about 28 and pulse 116. We continued to pursue the same treatment. On Sunday morning the respiration was brought

down to 12 in a minute. There had been a little tympanitis up to this time, which had increased somewhat over the transverse colon, but it was not marked, considering the disease; a little borborygmus was noticed. The treatment was pursued all Sunday. In the evening there was noticed a tendency in the pulse to fall—at one time down as low as 80 or 90. This tendency to fall was noticed the next morning, when it was at 92, and continued so until just previous to death. On Monday, 4 P. M., he vomited for the first time some beef tea, which was then discontinued. More opium given; returned after an hour and a half, to see him about to die. His hands were cool, pulse 120; respiration thoracic and very hurried; expression haggard and pinched; abdomen decidedly more tympanitic; vomiting of coffee ground material. He complained now of some pain; all this time he was in the perfect enjoyment of his senses. We gave him some stimulants, when his pulse would come up a little, and then merely flicker. He sank steadily; mild delirium set in, from which he would recover when he was wakened. At 12, midnight, his pulse was at his elbow, and he lingered until about six o'clock in the morning. He vomited persistently, at one time was quite delirious, but died in the unclouded possession of his faculties.

In examining him on the first day, I inquired if he had swallowed anything that might have got into the appendix vermiformis. No increased tenderness existed at that point then or afterwards.

Autopsy.—Ten hours after death—*Abdomen.* On removing the intestines carefully, they were found to be much distended with air, and agglutinated together. As we passed down in our examination they became more and more agglutinated as we approached the right iliac fossa. Here they were covered pretty generally with lymph. Some sero-purulent fluid escaped at this point, and presently a large cyst was found on that side (right), formed by tissues containing pus of a faint gangrenous odor. At one point we saw two or three grains of feculent matter, the largest about the size of a split pea. No gas escaped from the abdomen when it was opened. Perforation of the appendix vermiformis was found, and great intensity of inflammation existed in the pelvic region. Collections of pus were bound down by adhesions in two distinct spots. The bladder was empty and firmly contracted. The appendix vermiformis is seen attached to the cæcum by adhesions. The portion here about half an inch in length, the appendix vermiformis felt somewhat hard to the touch, and its calibre is somewhat distended. Below this point a perforation is very evident indeed. The patient took, during the whole treatment from Thursday

until the following Monday afternoon, nearly 21 grains of opium, which in this terrible disease afforded such a relief of pain as to allow him to sleep, his intelligence to be unclouded, and to have no headache during all the attack.

DR. A. CLARK observed that the prominent point of interest in this case, to him, was the entire absence of any sign by which we could determine where the inflammation began, or what was the probable cause; and after death, considering perforation out of the question, he felt that opium had betrayed us this time. When he went into the room for the post-mortem examination he had the feeling that he would not, himself, be responsible for opium in these little ones, inasmuch as he had lost one before, also, under very afflicting circumstances. But when the post mortem revealed this all but unconquerable disease, he felt that it was not so much the fault of opium as of the disease itself. The point that struck him forcibly was that we did not know whether there was more pain in the iliac fossa or not.

In another case that he had seen within four weeks the effects were quite different, i. e., if a correct diagnosis had been made. He saw a little child with Dr. Cadmus. She had suffered some days with pain in the iliac fossa, and a little above it. The doctor told him that there was an unusual hardness there for some days. There was then tenderness over all the abdomen. It was a child 10 years of age. She was suffering excruciating pain—it was even excruciating to hear her cries, which were sometimes prolonged for ten minutes together.

There was dullness on percussion over the right iliac region, also a doughy feel. Respiration 40, pulse 130.

She was seen again the next day, and in the mean time had taken as much opium as would afford relief from pain. On examination into the condition of the abdomen, tympanitis was tolerably marked, with a considerable degree of hardness in the right iliac region; pulse still pretty high, respiration pretty frequent, but tenderness mostly gone. The treatment was persisted in for four days more, when the pulse fell down to 85, if he remembers right. From that time it kept on gradually decreasing until convalescence was established. Now the doctor informs me that there is still a hardness recognizable in this iliac fossa, but much less marked. I suppose that the series of symptoms can be accounted for in no other way, except that perforation has taken place at that spot, peritonitis occurring also at that spot to seal in the centre of the disease. Here, then, was a case that was cured by the treatment that failed in Dr. Elliot's case.

DR. J. T. METCALFE thought that Dr. Clark's case was not conclu-

sive to his mind, nor did he believe that we can ever tell the difference between peritonitis, which is secondary to impaction of the cæcum with fæces, and that which takes place as a consequence of peritonitis, such as Dr. Elliot's case. The great difference in these two classes of cases is in their termination; cases of perforation of the appendix vermiformis are almost always fatal, while the other class not unfrequently get well. Dr. M. had several cases similar to the one cited by Dr. Clark, and from the manner they yielded to opium, antiphlogistics and counter-irritation, he suspected they were nothing more than impaction. He had only seen one case of true perforation recover, and he presented it to the Society, some 8 or 9 years ago. In this case the patient died of some other disease. He stated that there were a great many cases where it could not be told whether there was perforation, and even if this was known it would do very little good; there would be very little if any hope of cure.

DR. CLARK observed, as regards the probability of cure in these cases, his mind has been made up, and he is not skeptical as regards evidences. He was prepared to meet the testimony of such men as Graves and Stokes. It had been his fortune to treat one case of typhoid fever up to the end of the third week, and to discover a sudden lighting up of fever, increase in the pulse, pain first appearing in the right iliac region and then rapidly spreading over the whole abdomen, and with all this well-marked tympanitis. He treated that case with opium and it got well. He could not divest himself of the idea that in this case the peritonitis was the result of perforation.

DR. METCALFE would not deny the possibility of a cure in these cases, and referred to a case that occurred to him while physician at the New York Hospital, where a man presented precisely the symptoms related by Dr. Clark, and who died. On post-mortem examination, there was not the slightest lesion of the coats of the intestines. This was ascertained by filling it with water. There was merely an abscess in the right iliac fossa. This only went to strengthen his mind in regard to the extreme difficulty of being certain in the diagnosis of these cases.

DR. CLARK said that, in his case, the pain began at the part where a perforation would be most apt to occur; that the pain continued for an hour in that one spot. As regards the perforation in adults suffering from typhoid fever, Dr. Metcalfe was aware that peritonitis, without this perforation, was one of the rarest things a physician is called upon to treat. He had never seen but one fatal case of this

kind without perforation, and it had been his fortune to see a vast deal of this disease.

DR. CLARK asked the opinions of Dr. Lewis upon the subject, he having seen a great deal of this disease.

DR. LEWIS, in connection with the case of Dr. Metcalfe, referred to one treated by Dr. Warren, of Boston. The patient had a tumor on the right flank, which was attended with peritoneal inflammation. He recovered, but the tumor did not decrease; it continued in that condition for two or three years, every now and then lighting up a new inflammation. He eventually died, 4 or 5 years from the first attack, with perforation of the vermiform process. Dr. Warren supposed at the time, from the appearances, that this tumor was in reality an abscess of the vermiform process. This, he believed, was proved by an autopsy. He next referred to a case of supposed perforation into the abdominal cavity. The patient was a subject of hernia. The appendix lodged in the inguinal canal, formed an abscess which ulcerated and discharged a portion of bone on the outside. The patient died afterwards of some other disease. There is still another case which was supposed, and with very good reason, to be perforation in the abdominal cavity. An abscess was formed and a foreign substance discharged through the abdominal walls. The foreign substance discharged had every appearance in form and shape of coming from the cæcum. The patient recovered. This is reported in some one of the English journals. In reference to the difficulty of localizing the disease, he stated that it was very uncommon to have the attention directed to the right iliac region. In forty odd cases that he had collected, one third of them presented nothing to draw attention to that point.

DR. MARKOE referred to a case where treatment had succeeded in curing peritonitis which was the result of perforation. It occurred in a child. Pain was at first localized in the region of the cæcum; in twenty-four hours afterwards symptoms of general peritonitis came on. By leeching and opium, the symptoms were entirely controlled. In a month after, the child dying of another trouble, the post-mortem examination showed perforation of the appendix vermiformis to have taken place, which produced peritonitis, which was evinced by the intestines being bound down at different spots. He considered it as a case of peritonitis entirely cured, the evidences of which were indisputable.

Rupture of Right Ventricle.—DR. J. R. LEAMING presented the following history of a case: On Tuesday morning, the 6th of April, R. P., a native of England, 32 years of age, a plasterer by trade, called

at my office. He said that within a few days he had been attacked suddenly, while walking, with pain in the chest, which was so severe he had to sit down till it passed off. He could not walk a block without having an attack. I examined his chest by percussion and auscultation, and found nothing wrong. He was a medium-sized, muscular man, and had enjoyed pretty good health, with the exception of biliousness. Believing the attack was nervous, caused by gastric derangement, he was ordered a simple laxative. The next morning, (Wednesday,) I was sent for to see him at his residence. He was lying on the bed, said he felt perfectly well, but had an attack coming up stairs that morning, and he thought best to see me before going out. He then told me he had forgotten to mention at the office, that the week before, on Wednesday, 31st of March, he carried a heavy centre piece of ornamental plaster work from his shop in 4th Avenue and 23d Street, to Lexington Avenue and 34th Street; that he carried it on his head supported with his hands; that he was nearly exhausted when he let down his load, and immediately had the first attack of that pain. I again examined his chest carefully; there was no murmur with either sound of the heart, and the rhythm was perfect; respiration was natural, and the sounds of the lungs were healthy. He was ordered to keep still, to take no medicine, and to eat lightly. He sat up reading and feeling perfectly well; at dinner he ate heartily. Just after dinner, while he was still reading, his wife left the room for a few moments, when she heard him call. She found him doubled up with pain on the floor. I saw him about 3 o'clock, when he was suffering violent pain, which he located at the lower part of the sternum. The pulse was feeble, intermittent every third beat, respiration difficult, the heart's action convulsive, bounding, leaping. He had no sensation below the elbows, hands and feet cold, lips blue, nostrils dilated. He was ordered brandy and the hands and feet to be rubbed with dry mustard. I saw him again in about one hour and a half, his condition not much altered, except that he had vomited part of his dinner, and the pulse intermitted every other beat. Stimulants continued. At nine o'clock I saw him again. Reaction was partially established, still the heart labored at times; he was constantly coughing, and had expectorated nearly a pint of mucus, tinged with blood, and there was crepitant rale over the right side of the chest. In the morning, (Thursday,) the cough and expectoration had ceased, but the dyspnoea was increased, with great restlessness. All efforts to relieve him were unavailing, and he died at half-past ten in the evening. Examination of the body was made on Saturday morning, at nine o'clock, in the presence of

Dr. A. C. Booraem. The superficial veins of the thorax were distended with blood. The lungs very much congested, but there were no appearances of former disease, no pleuritic adhesions. The pericardium was loose about the heart, and on being opened a small quantity of serum, tinged with blood, was found, and a small wound in the heart about a line in length and an inch from the apex, from which fluid blood was oozing. This opening was found to communicate with the inferior part of the right ventricle. No further examination was made.

Dr. FINNELL inquired how long after he died was the post-mortem made?

Dr. LEAMING replied, that he died on Thursday, and it was made on the Saturday following.

Dr. FINNELL observed, that it frequently happens in dividing the second intercostal cartilage the knife slips down and wounds the heart, and it is not discovered until the heart is actually taken out. He had always noticed, when post-mortems were made more than 24 hours after death, there was always bloody serum in the pericardium.

Dr. CONANT thought if rupture did take place, it would be across the fibres, and death would occur almost instantly.

Dr. POST in this connection referred to a case that occurred in the New York Hospital some years ago. It was a rupture of the heart and injury of a number of other vessels, caused by being jammed between two vessels. The rupture was large enough to admit four fingers, and yet the patient lived 7 hours. He was in a state of prostration all the while, however.

Dr. MARKOE was slow to admit that rupture of the heart was the cause of death. He thought that the length of time the patient lived would conflict with the idea, also, that the opening was too small for a laceration. There are only two causes of rupture: 1. Where the heart is so diseased that mere ordinary exertion is sufficient to rupture it. 2. When the heart has its natural strength of tissue, and is ruptured through by some very great exertion or violence, as in the case cited by Dr. Post. In both these cases the rupture is of considerable extent. He thought that, in this case, he would have a great deal of hesitation in presenting it as a case of rupture, for its edges were smooth, and the wound of such a small extent that it had every appearance of being made by the knife.

Endo-metritis—Phlebitis.—Dr. CLARK exhibited several specimens. The first was a case of Endo-metritis—Erysipelas—Inflammatory Phlebitis of Femoral and Saphenic Veins. The history of this speci-

men is as follows: A woman was delivered on the 30th of March without any accident in her labor. On the 31st erysipelas of the left leg appeared, which, however, subsided very readily. On the 4th of April she began to exhibit symptoms of endo-metritis; she had a chill; the lochia was suppressed, and there was a certain degree of tenderness over the uterus, perhaps at the two sides. On the second day after the occurrence of the symptoms, there were indications of phlebitis, inflammation of the femoral and saphena vein; tenderness; a certain degree of redness over the vein, near to Poupart's ligament, and so down for a certain distance. The leg began to swell; erysipelas had then subsided, but in a day or two an erysipelatous blush appeared; at the same time there was a surface of a pale yellow color with tumefaction, and a slight tendency to vesication running up the inside of the leg in the course of the lymphatics, toward the ring. The severity of the phlebitis did not seem to be very considerable during life, although after death it appeared that it was about as intense as it could well be. After the swelling made its appearance she had a chill; if not that, at least a sweat every day afterward until her death. Just previous to her death she contracted large bed sores, which were disposed to slough pretty deeply. Under the influence of these, with her original disorder, she died the day before yesterday. The examination that was made disclosed all that had been made out during life, and I believe very little more.

Autopsy.—The uterus for the 16th day after delivery was rather unusually contracted, considering that there was inflammation of its inner surface. The exudation as the result of inflammatory action still remains upon it in moderate quantity. The neck is ecchymotic, as is often the case after labor. At the upper end of the uterus is the remains of the placenta. Deep in the placental attachments is found pus. The sinuses of the uterus were not discovered to be in a state of inflammation, but the right broad ligament was involved in inflammatory action. It was believed, though not demonstrated, that the ovarian vein of that side was filled with pus. At any rate, pus was found in some tube, but it was a little uncertain whether it was a vein or an enlarged lymphatic. There was a certain amount of inflammatory action upon the posterior surface of the uterus, and a little about the peritoneum, with which this broad ligament was in contact; otherwise there was no peritonitis. The femoral vein is here filled with a plug, which appeared at the time of the examination a simple coagulation of blood. It is undoubtedly partly blood and partly fibrinous exudation. The saphena vein was slit open down to this point,

and the remark that was made on opening it was, in substance, that this was a substantial apology to those who call this disease milk leg, for the contents of the leg did look really like thick milk. In other words, it was pus in the ordinary state of diffuency. The plug in the vein is complete, so that the pus from this region did not pass into the circulation. The plug is in the femoral vein, and also in this branch of the saphena at its inside. The chief interest in this case is the connection and concurrence of endo-metritis with inflammation of the veins of the thigh, and yet the absence of any traceable connection between the inflammation in the thigh and the inflammation in the uterus. It was one leading object of the dissection to discover whether this inflammatory action was continuous up the external iliac into the vena cava ascendens, so as to meet any of the veins that take the blood from the uterus, either ovarian or uterine. A pretty diligent search was made, but no such connection found; yet the two are inflamed together.

I should have remarked, as a further evidence of inflammation in connection with the uterus, that the fallopian tubes were both pretty completely filled with pus. The purulent infection in this case was probably from the uterus, and not from the veins of the leg.

DR. MARKOE.—How clearly marked was the character of the erysipelas?

DR. CLARK.—The first erysipelas occurred before my term of duty commenced. I did not see it. In the second attack there were those appearances usually noticed on the first day of an erysipelatous inflammation, a very distinct blush and tumor of the skin, terminating abruptly, with the exception of a space of yellow color that I described. This subsided in 24 hours, on the application of a cool solution of opium.

DR. GARDNER asked if the first erysipelas entirely disappeared before this metritis came on.

DR. CLARK.—My impression is that it had subsided, and that which occurred afterwards was altogether a new production. In answer to a question from Dr. Jenkins, as to whether delirium was a very common, and almost pathognomonic symptom of purulent affection, he stated that it was by no means the case; the decided majority have none whatever.

DR. WHITE stated that he did not see why there was not some connection between the pus in the veins of the leg and that formed in the uterus.

DR. CLARK said that is just what we all did not understand. We searched for this connection and found none. But the concurrence of

these two diseases suggests the inquiry for future observations, whether or not there is any connection in the diathesis.

DR. MARKOE asked if it was not a common fact that the manifestations of suppurative phlebitis occur in different parts of the system, when no visible connection can be traced between them.

DR. CLARK—My opinion about that has been, that though different and distant portions of the body are often found at a post mortem the seats of inflammatory action, there was notwithstanding a single point of primary inflammation, and the numerous other points were secondary to the first.

DR. MARKOE—This case would fall under that category. The primary affection in the thigh, and the secondary in the uterus, or vice versa.

DR. G. T. ELLIOT being referred to, stated that at the time he saw her it was impossible to tell whether there was erysipelas present, or whether it was an attack of erythema. It was stated to him as a case of erysipelas.

Bony Cyst of Kidney.—DR. CLARK then presented a specimen of a bony cyst in the body of the kidney. A cyst which will hold a tea spoonful or more, entirely enveloped in a calcareous cyst, with a good deal of calcareous matter surrounding it. In one part it is half an inch in thickness, in another part not more than one-twelfth of an inch. The kidney in other respects appears to be perfectly healthy. In cutting through it, it was necessary to use the saw. He supposes it is a serous cyst of the organ that has degenerated in this way, and become incrustated with calcareous matter. There is no history of the symptoms connected with it, so far as it was known. The patient was brought into the hospital with double pneumonia, and died soon after admission. The other kidney was healthy.

Extensive Cancerous Disease.—DR. CLARK next exhibited an instance of cancer of the pleura, of the lungs, of the small intestines, &c. He observed, in regard to this specimen, that he regretted that the usage of the Society, and the regulations of Bellevue Hospital, do not permit the bringing of a whole body as a specimen. This afternoon he had inspected a pathological museum. He has never seen so much disease in any one person before. The leading disease was cancer. It did not appear that she had had any external cancer that had been removed, the breasts were entire, and there was no cicatrix on the body anywhere that would indicate any serious surgical operation, yet the lungs were almost a mass of cancerous disease. The amount of cancerous disease of the lung probably exceeds anything ever exhibited here before; at any rate, it is greater than any that I have ever

seen. With this cancerous disease of the lung there is also cancerous disease of the pleura; *cancerous disease of the small intestines, and none in the large*; cancerous disease of mesenteric glands; scrofulous tumors of arm and groin; fibrous tumor of the uterus, with a little polypus in the interior, making together a very considerable variety of disease; and yet, for all that, the woman had a right to live, and was not killed by any one of them, but died of apoplexy of the brain and kidney—that is to say, effusion of blood into its substance. We could not make anything of her history, she being insensible when admitted. She lived three or four days. The day before her death she seemed to have some difficulty in breathing.

Regular Meeting, April 28, 1858.

Dr. T. C. FINNELL exhibited several specimens.

Spinal Cord.—First specimen: Spinal cord, taken from a woman who entered St. Vincent's Hospital, four months ago, suffering from the results of an injury to the sacrum and coccyx, from falling down a long flight of stairs. The fall was followed by a good deal of pain and distress in the part; this soon after was followed by severe inflammation, and sloughing over the projecting portions of the sacrum. In this condition, with a large ulcerated surface, she entered the hospital. On admission she was exceedingly weak, being prostrated from the immense discharge that was taking place. She was placed upon her abdomen with a view to heal up the surface, but it would not do. From time to time portions of necrosed bones were removed by the bone nippers. While upon the abdomen the wound would heal up partially, and then sores would appear on those prominent portions of the body resting upon the bed, over the patella, the prominent portions of tibia, and on the instep. She continued in this way for more than four months, suffering from extreme pain, and a discharge from eight or ten ulcerated surfaces.

Autopsy.—The lower portions of the sacrum and coccyx. The surrounding soft parts were in a state of mortification; the bones were dead and necrosed. The portion of the spinal cord in the sacrum was so softened that it could not be removed. The cord above the points of softening was intensely injected. There was no paralysis at any time during the whole history. The inflammatory action extended itself from the sacrum and coccyx, to involve the uterus and rectum, agglutinating the whole pelvic viscera together.

Larynx of a Suicide.—The second specimen was the larynx of a suicide, who cut his throat with a razor. Several different incisions were made across the thyroid and cricoid cartilages; they were mostly

upon the right side, and by two of these incisions the suicide had cut out the crico-thyroidean membrane completely. It shows an anomaly also in the fact that the right superior cornu is absent. It is not known how long he lived after the infliction of the injury.

DR. DALTON.—I would ask Dr. Finnell what was the cause of death?

DR. FINNELL.—Hæmorrhage.

DR. DALTON.—From carotid?

DR. FINNELL.—I suppose from the smaller vessels; the carotid was not injured.

DR. DALTON.—In that portion where the crico-thyroidean membrane is cut away, were the integuments over that spot absent, or did they simply retract?

DR. FINNELL.—At the time of the examination I satisfied myself that the integuments were gone, though I did not try to approximate the edges.

DR. DALTON.—It is a very singular wound; the membrane must have been taken away by two distinct cuts. Here are four different cuts that are made, and I would ask if such a circumstance is not a very rare one in any but an insane person? Was this patient insane?

DR. FINNELL.—It is very rare for suicides to make more than one free cut, when they divide everything. This patient was not insane.

DR. HARRIS asked if such repeated attempts might not be owing to mania-a-potu, as well as insanity.

DR. FINNELL.—In all the cases of suicide in delirium tremens I have examined, I have always noticed but one incision.

DR. FINNELL stated in relation to this case of suicide, that the right cavity of the heart was empty; he had often noticed this to be the case in sudden hæmorrhage.

DR. DALTON asked if he had ever measured the quantity of blood lost on these occasions.

DR. FINNELL.—I have often tried, but seldom, if ever, succeeded. In some the amount lost is very small, in others very large. In the case of the negro woman shot in 26th Street, the quantity lost was estimated at two quarts. In the case presented this evening, the quantity was possibly over a quart. In some cases the quantity in suicidal cases is not more than eight or ten ounces, yet they die from its loss.

DR. HARRIS.—The question might be asked, how great a quantity of blood must necessarily be lost to destroy life?

DR. FINNELL.—This question has been put to me in court, in every possible form. I have stated that the amount varies very much. In

one case that occurred in Second Street, about a year ago, a woman cut her throat, lost about two quarts of blood, after which she went to the window and threw herself out on the pavement below, thereby producing fracture of the skull and other injuries. It would seem that she had lost blood enough to destroy two or three other persons. It had been assumed, from the circumstances of the case, that she had been murdered by her husband; and though there could be no one who could be brought to swear positively against him, it was a very difficult thing to get the jury to agree as to its being a suicidal case.

Gunshot Wound.—The last specimen is one showing the effects of a gunshot wound. It consists of the femoral artery and vein of the left side, with a portion of the pelvis and bladder and penis taken from the body of a negro man, who was shot at the Brandreth House a few days ago. The ball entered a little below Poupart's ligament on the left side, passing obliquely downwards and inwards through the artery at this point, and out at this point, leaving only a small thread between the two openings. These openings are seen, the vessel being stuffed with cotton; the ball then struck the ramus of the pubis, and drove some of the fragments into the bladder below. He probably lived five minutes after the reception of the injury. The bullet was found in the urethra in this position. There was also found a piece of button, which went before the bullet through the artery and vein, and through the bone, when it lodged in this position.

Edema Glottidis.—DR. CONANT showed a specimen of œdema glottidis for DR. C. W. PACKARD.

David D——, a native of Scotland, aged 40 years, laborer, of temperate habits, was sent to Blackwell's Island April 23d, 1858, suffering under erysipelas, involving the scalp and upper part of the face.

Three days before admission patient noticed a redness and puffiness of the eyelids, which so interfered with sight that he became unable to work. At the time of admission there seemed to be nothing unusual in his case, save a great degree of œdema in the parts affected.

April 24th, 4 o'clock, P. M. Patient has taken some nourishment, and appears to be very comfortable. The erysipelas has extended to the clavicles; head and neck very much swollen, and of a dusky red color; head thrown back; respiration easy; no cough, or marked dyspnoea.

9 P. M. Patient visited again; says that he feels better. Got up without assistance, to urinate. On returning to bed again was suddenly attacked with urgent dyspnoea, and died in fifteen minutes.

Autopsy 14 hours after death. Rigor mortis passed away. Scalp

face and neck greatly swollen and discolored. On removing the larynx a white glossy bag was discovered extending from the anterior surface of the epiglottis to the posterior corner of the thyroid cartilage, the portion along the right edge of the glottis being pendulous, and falling down towards the rima glottidis; the contained fluid was gelatinous, and of a bluish tinge, resembling the effusion which sometimes follows the application of a blister to the epidermis.

Mucous membrane of the larynx and upper part of the trachea of a deep uniform red color, shading off into pink as the bronchia were approached.

Lungs somewhat congested. Cerebral veins full of blood. Heart and other organs healthy.

Regular meeting, May 12, 1858. E. HARRIS, M.D., Vice-President, in the chair.

DR. AGNEW presented a specimen of *fracture of the ribs, rupture of spleen, &c.*, for Dr. George F. Shrady.

R. P——, æt. 42, a native of Scotland, was admitted into the New York Hospital, April 30, 1858, in the service of Dr. S. M. Halsted. The patient a short time previous had fallen into a ship's hold a distance of fifty feet or more, striking upon his left side. On admission he was considerably prostrated, skin cool and pulse frequent. The ordinary stimulants were administered, and reaction was soon fully established.

On examination into the extent of the injuries received, there was found to be fracture of the 6th, 7th, 8th and 9th ribs of the left side, with a considerable degree of emphysema, showing the lung to be wounded.

The ulna was found to be fractured about three or four inches from the elbow; there was also a dislocation of the radius, the cup-shaped head of which was plainly felt through the skin over the external condyle. There was no opening into the soft parts. The arm was placed in a rectangular splint, and a body bandage applied.

The patient went on very well for a day or two, the emphysema having nearly all disappeared; when it was ascertained that there was a considerable amount of effusion in the left pleural cavity. Dry cups and blisters were applied, but with little good resulting; he seemed to grow weaker, breathing became more difficult than it had been, pulse became more frequent until the 5th day after the reception of the injury, when he died.

Autopsy ten hours after death. The cavity of left pleura was half filled with bloody serum. The 6th, 7th, 8th and 9th ribs were found

to be fractured near their angles. The lower lobe of lung of that side had a lacerated wound into its substance about an inch in diameter, half inch in depth, corresponding to the fracture of the 7th rib, a fragment of which was driven into the organ. The right pleural cavity contained a small quantity of bloody serum.

The cavity of the abdomen contained a large quantity of clotted blood, which came from a rupture of the spleen, at its hilum. The liver was uninjured. There were no evidences of any peritonitis.

On examining the seat of injury in the arm, the ulna was found to be fractured about four inches from the extremity of the olecranon, and somewhat comminuted. The head of the radius had pushed itself through the upper portion of the fibres of the supinator radii brevis muscle. It seems that he struck upon the elbow causing the fracture, and the force still continuing to act dislocated the radius as before described.

Gangrene of Lungs—Serous Cysts of Kidneys—and Cyst of Liver.—

DR. CLARK exhibited two kidneys and a section of the liver of a woman, who was received into the Bellevue Hospital about ten days before her death, which took place about five or six days since. When admitted she showed the marks of having been treated for some disease of the throat, of an inflammatory character, inasmuch as the whole anterior surface of the neck was the seat of a blister partly healed. She was without voice, respiration was somewhat difficult and slightly stridulous, so that there was no hesitation in assuming, without knowing anything of her previous history, that the trouble was laryngeal. He is unable to give the previous history. The prominent points of the case, while in the hospital, were as follows: She gradually recovered from her laryngitis so that her respiration became easy, and her voice returned. But as she recovered of the laryngitis, there continued an exceedingly offensive odor, which he had forgotten to mention was noticed at the time of her admission. It had at that time the character of a mercurial breath, and he had no doubt that it arose from that cause, as there were marks of ptyalism in her mouth. This odor gradually merged into one more offensive, having slightly the character of gangrene; yet it was so mixed up with the odor previously noticed, that he was deceived in regard to its being positively gangrene of the lung, as it turned out to be in the end. The expectoration was not of that peculiar green color so commonly observed in gangrene of the lung, but was more of a grayish color, looking a great deal like the expectoration of pneumonia in the transition from the red into the purulent stage. In this condition she con-

tinued to grow worse and worse, and was losing strength rapidly. Two or three days previous to her death he became satisfied that she had gangrene of the lung, though he could not locate its situation definitely; probably the cavity was at that time filled. She died soon after from the effects of this gangrene.

Autopsy—Post-mortem examination.—The gangrenous part occupied its usual position a little below the central portion of the lung behind. The interesting part of the case is that illustrated by the specimens upon the table.

It is a kidney that has become almost completely degenerated by serous cysts. There is scarcely a portion of the secreting portion of the kidney to be seen. It is the left, and weighs 2 pounds and 14 ounces. The right kidney is somewhat smaller, weighing about 2 pounds and 2 ounces. In this latter a portion of the secreting structure can still be seen. When the specimen was recent the vascularity was perfectly natural. There were no symptoms that would lead to the suspicion of any kidney disease, at least during her stay at the hospital. What her previous history was he is unable to say. There is also a very unusual cyst of the liver, situated mainly in the inferior portion of the right lobe. That it is not enlargement of the ducts is rendered probable from the fact that smaller cysts, the nature of which is unknown, were found in large numbers on the free border of the organ, presenting the appearance of a cirrhotic liver. In the inferior portion of the tumor there are evidences of adhesion to some of the surrounding tissues; whether this was caused by pressure, or the irritation of the presence of the tumor, did not appear at the post-mortem examination. The first view we should naturally take of this cyst is that it is an hydatid. If it be an hydatid tumor, the question would arise, why there are so many smaller tumors in the neighboring portions of the liver. Hydatids never appear in that manner. Then on feeling the tumor there is no rubbing sensation experienced by the finger. Hydatid tumors of that size are pretty sure to have something in them, a number of smaller cysts. It was a possible thing to recognize hydatids of the liver during life by the peculiar rubbing sensation that it communicated to the touch. Dr. Clark cited a case he had seen under the care of Andral, when the diagnosis was thus made out: There was nothing of that feel in this tumor after it was removed, and it was not known to have existed during life.

In regard to the serous cysts of the kidney, Dr. Clark had heretofore expressed a decided opinion, the result of his own microscopic study, viz., that they are a new production altogether. They are not

owing to obstruction of the uriniferous tubes by inflammatory or any other diseased action; they are not owing to expansion of the malpighian bodies, but to a new cell growth deposited between the cup-shaped tubular portion and the malpighian bodies. If they were owing to obstruction of the uriniferous tubes, &c., there would be a marked derangement of health attending their development. It is a new cell growth which appears in that part of the body by preference, deposited in the stroma of the kidney, between and outside the uriniferous tubes. We have perhaps similar deposits in the mammary gland, in the broad ligaments, and in the cellular tissue about the ovaries.

As regards the cyst of the liver, it would be well to open and look into it. On laying it open the contents seem to be a slightly viscid and perfectly transparent fluid. It is highly probable that these small transparent eminences that were observable upon the neighboring portions of the liver were of the same character, and that we have really a cystic degeneration of the liver itself—a form of disease which Dr. Clark has never seen, so far as he knows—a condition which has not attracted much attention. The case, then, is substantially one in which laryngeal inflammation occurred, went to the point of producing serious disturbance of the respiratory function; following this, gangrene of the lung, which destroyed life; the post-mortem examination developing two forms of disease that were not suspected during life—extreme cystic degeneration of one kidney, very considerable of the other, and a cystic disease, such as has been described, of the liver.

These specimens indicate, along with three or four other specimens that have been presented to the Society, extreme degeneration of the kidney, and the very slight influence that form of disease has upon the general health. In general it has not been recognized during life, the patient dying of some other disease.

It will be found that, when kidneys that have undergone this degeneration are examined carefully, the kidney remains, but is broken up into laminæ, and these form really the divisions, the septa between the multiple cysts, so that the kidney goes on to perform its functions, not as a conglomerate organ, but in layers in which it is divided, and it is for that reason that its function is not disturbed until the last few days of life.

DR. MCCREADY called to mind a case that occurred in Bellevue in his wards, a number of years ago, in which a cyst was developed in the upper part of the liver, pushing up the diaphragm, and which contained a couple of quarts of slightly turbid fluid.

DR. CLARK observed, is there not reason to suppose that it was hy-

datid degeneration? He has a specimen similar to that in his museum, which contains two quarts of fluid, but on examining the sedimentary matter he discovered the hooks of the echinococcus, showing the animals to be all destroyed.

SELECTIONS.

A Case of Fracture of the Lower Jaw at its Neck. By M. O HEYDOCK, M.D., Chicago, Illinois.

I was called upon on the evening of the 21st of May to see Mrs. B. F. H., who had, I was told, just been thrown from her carriage, and severely injured. Upon my arrival, I found that a fracture of the lower jaw constituted the only injury of a serious nature, the treatment of which is the subject of this paper.

The fracture was evidently at the base of the left condyle; crepitus was very marked and distinct, and deformity arose from a swaying of the jaw to the left, owing, as I suppose, to contraction of the pterygoid muscle. The fracture was easily reduced, the ordinary roller bandage applied, and cold water dressings ordered for the night.

Upon calling the next morning, I found that soon after falling asleep displacement had taken place, and it was in the same condition as at first.

I now applied a pasteboard mould and the roller as securely as possible. The next morning I found that this had served the purpose during the day, yet during sleep displacement had again occurred, as in the previous night.

I now, with the approval of Dr. Freer, who had seen the case with me, had a spring made, partially encircling the neck, having a pad at each extremity, making pressure upon the left ramus and over the right articulation, hoping to counteract and overcome the action of the pterygoid muscle.

This acted indifferently well and was thrown aside. I now used one after another, starch, binders' board and straps, and during the ensuing ten days, almost every bandage I could find, approved by authors or suggested by friends. But each and every one failed me in my effort to retain the jaw in its place during the night, when voluntary control was lost in slumber. Two weeks had elapsed, displacement had occurred each and every night, crepitus was still as marked as ever, and pain on motion as great.

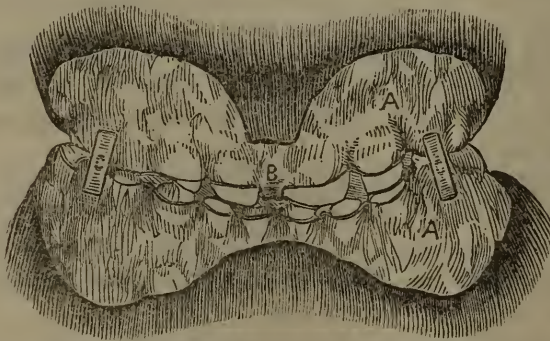
The prospect was anything but encouraging, a false joint seemed not only a possibility but a probability, unless by some contrivance immobility could soon be obtained.

I had exhausted my inventive resources in external appliances, and

I now made a careful examination of the teeth, to see if from them I could not obtain some hint which would assist me to accomplish the object I had in view. I observed that the upper central incisors were widely separated, and it occurred to me that advantage might in some way be taken of this peculiarity. A few hours elaborated the idea which had presented itself, and which was, with the modifications to be hereafter mentioned, successfully carried out and executed.

The idea suggested was, that a mould of the teeth of the lower jaw should be taken, running as far back as the molars, and from this a gold cap should be made which should snugly fit, and be securely and firmly attached to the teeth by clasps or otherwise. To this cap, at the point of separation between the central incisors spoken of above, a fragment of gold was to be attached, which should, when the jaws were closed, pass up between these incisors somewhat in the manner of a wedge. If I am understood, it will be seen that, if the cap retains its place, I have by the wedge-like process overcome the tendency to lateral displacement.

I now called upon Dr. Allport, a dentist of our city, and stated my project to him. He suggested that the pressure of the wedge, even though slight, and though not exerted during the day, while the jaw was under the control of the patient, might give rise to some soreness and irritation if continued as long as the nature of the case demanded. He proposed to overcome this objection, by fitting a cap for the upper jaw, similar to that of the lower, into which the wedge should be inserted, thus distributing the pressure. The two caps were then to be secured together by a couple of slender bars crossing from one cap to the other.



A A represent the two caps: C C the cross-bars connecting them; and B the wedge passing up between the incisors and hidden within the cap.

Impressions were now taken in wax, and the caps made after the same manner as the plates made by dentists for artificial teeth.

Upon placing the caps in position, it was found, as we had anticipated, that the gold operating on a foreign body would not admit of a closure of the jaws. To obviate this, the opposing and impinging surfaces were freely cut away, exposing the crowns of all the teeth, thus permitting a close approximation of the jaws, and at the same time furnishing an outlet for the secretions which would naturally ac-

cumulate within the caps, and prove a source of annoyance and irritation.

The relation one cap would bear to the other was ascertained by placing them in position, and directing the patient to bite into a mass of softened wax, and while the caps were imbedded in the wax they were removed and secured in this relation by bars crossing in the neighborhood of the canine teeth of each side.

Dr. Allport now suggested that a thin layer of gutta serena should be placed inside the caps, which might, by its presence as a lining, prove less irritating than the plates alone, while at the same time it would more perfectly adapt itself to the inequalities of the surfaces than the metal. This, after being softened in boiling water, was laid within the caps, and they placed *in situ* while it was soft and pliable and as hot as could well be borne. The patient was then directed to shut the jaw naturally, and it was then firmly pressed home and immovably fixed.

I applied the roller bandage at night for a week or so, to guard against any possibility of displacement from fright or other cause, though there seemed to be little occasion for it, for voluntary motion even was lost to the patient. The natural projection of the upper teeth over the lower, combined with the slight separation of the jaws caused by the caps, gave ample opportunity for the ingress of soups and other fluids by which the patient was nourished and supported, until the removal of the caps.

During the first two weeks considerable pain was experienced in the neighborhood of the fracture, and at the expiration of that time the provisional callus was perceptible through the tissues.

Four weeks having elapsed from the day in which the caps were applied, and six from the date of fracture, they were removed, and union found to be complete. For the first few days the articulating surfaces of the teeth did not readily come together, but at the end of a fortnight the recovery was perfect and satisfactory in every particular.

There was, upon removing the caps, some soreness of the mucous membrane, but this rapidly subsided under the use of an astringent gargle combined with chlorate of potash.

As a general rule fractures of the jaw are easily treated, the roller, pasteboard and starch proving sufficient. But in this case they were of no service in restraining lateral motion, and until this experience I confess I was not aware how difficult a thing it was to control that movement. I certainly gave them a fair trial, for Fergusson tells us, in his work on surgery, that he "does not take particular pains about the bandages after the fifteenth day," while in this, two weeks elapsed without any perceptible change for the better; nor was there any promise that there would be if the same course was continued for a longer period.

In closing, I would say, that it is not of course to be expected that in all fractures of this nature the incisors will be found conveniently separated and admitting of an application of just such a contrivance as this. But this report will have accomplished its errand, if from it any one shall have obtained a hint, assisting him to control the lateral

movement of the jaw—a thing which, like many things else untried, seems to the uninitiated, simplicity itself, while in fact it gives rise to an anxiety and vexation of spirit “not dreamed of in their philosophy.”

Since writing the above report, I have seen a case where there was a fracture of this bone at the symphysis. The gentleman in whose practice it occurred, finding it difficult to retain the fragments in their proper relation with each other by the roller and pasteboard, sent the patient to Dr. Allport, the gentleman who had prepared the plates for me in the previous case. The tissues were lacerated at the point of fracture, and one of the fragments fell below the other and projected slightly beyond it. The course to be pursued was to bring the jaws together, and there retain them as motionless as possible; but it is a difficult thing to apply a bandage here, which shall for any length of time maintain the integrity of its pressure and support, and in these cases relaxation prevents our obtaining the end we have in view, in its application.

Silver caps, lined with gutta percha, were applied in this case, as in the one reported. By them all motion of the bone backwards, forwards and laterally was controlled, and in a great degree its downward motion also.

Being a near neighbor of Dr. Allport, I was asked, in the absence of Dr. Freer, to apply some bandage to support the jaw, after the caps were placed in position. I proposed the following: A skull cap made of brown linen, or some material a little more substantial perhaps, which should fit as snugly as a wig. To this lappets should be attached in front of the ears with buckles, a padded pocket for the chin should also be made of the same material, and to this should be fastened straps, which being drawn through the buckles, give a leverage upon the jaw that we can increase or diminish at pleasure. One strap was fastened to the cap, over the region of the anterior fontanel, so as to get direct upward pressure; while the one attached to the cap, with the crown as the starting point or fulcrum, has a tendency to draw the bone backward.

I believe the skull cap and straps here introduced will be found to be the best and simplest external appliance, for all fractures of the jaw. It does not slip like the roller, the pressure is distributed, and it can be loosened or tightened in a moment, with little or no trouble.

It may not be a new idea, yet I do not remember ever having seen it mentioned. At any rate, a thing so simple and effective cannot be too generally known.—*Chicago Med. Journ.*

Treatment of Neuralgic Pains by Narcotic Injections. By DR. ALEX. WOOD.

All those who have paid much attention to the pathology of neuralgia, must be aware that very great additions have been made to our knowledge of the pathology of this disease, and important improve-

ments have been suggested in the valuable work of M. Valleix, published in 1841. That gentleman pointed out the fact, which seemed to have escaped the notice of all previous observers, that the superficial nerves are the ones most commonly affected; and not only so, but that there are certain points in the course of each nerve which are more liable to be affected by pain than the rest of the nerve; and that these points are precisely those where the nerves approach the surface of the body. M. Valleix has noticed four points in the course of every nerve that are liable to be affected by neuralgia, and where the neuralgic pain is more apt to occur than in the other points. The first of these is the point where the nerve emerges from the bony canal through which it passes; the second, the point where the nerve traverses the muscles to ramify in the integuments; the third, the points where the terminal branches of a nerve expand in the integuments; and the fourth, where nervous trunks become superficial during their course. This writer has gone most carefully over the entire nerves of the body; and has shown the various points not only generally in reference to the whole nervous system, but has also, in detail, indicated each particular spot where we may expect the pain to be seated, according to the particular nerve affected. That is the first matter I would like to impress on those who take an interest in the subject. It is of importance to note, that the value of this information is that it enables us to find the place, often very limited in extent where the tenderness on pressure indicates the propriety of local applications; and also, that from the nerve being superficial, there it is, of course, more within the reach of remedies applied externally.

“There is another great fact which M. Valleix has shown; and that is, that while the pain in neuralgia is most generally intermittent, the unfortunate patients attacked by it are subject to have paroxysmal attacks; and, while there is thus a difficulty in applying your remedy during the attack, you can at any moment, even during the intervals of the pain, awaken it by pressing firmly on those points in the nerve I have indicated. Let me give an example. A patient complains, let us say, of a pain in his brow. The pain, he says, is often severe: it comes on, perhaps, after he goes to bed at night; but at this moment he does not feel any pain, and therefore he fears that you can be of no use to him. Well, seat him in a chair, place his head back, and take a coin—a shilling will do very well—and press with the edge of it along the ridge of the forehead, and immediately it comes to the point where the nerve emerges the patient will scream out. I have seen and tested this so often that I can confidently state that it is a case likely to occur often in practice. Or, perhaps, to take another instance: a patient is laboring under sciatica. In that case press firmly near the posterior edge of the trochanter major, or near the superior spinous process of the ilium, or at the upper part of the ischiatic notch, and, in all probability, not only will the point so pressed on exhibit tenderness, but a distinct pain proceeding down the limb will be produced.

“A very interesting class of cases is that of young women who suf-

fer from pains about the mammary region and the intercostal spaces. These are very often mistaken for *pleuritis*, and are treated with leeches when there is no necessity for them. If you take a patient suffering from such pains, (which are very often accompanied with menstrual irregularities,) and press on the outside of the spinous processes of the vertebræ, or along the lower margin of the rib, you will very quickly awaken the pain, which is quite a sufficient test of the fact that it is neuralgic pain, and not pain produced by inflammatory action; and that fact being so ascertained by the use of the little instrument I have to speak of, the pain is at once abated, and in many cases entirely cured.

“Another seat of pains which may be treated with this instrument, is the abdominal parietes. There are two parts where I have found the pain to occur very frequently: one is over the region of the liver; and I am satisfied that the existence of neuralgia in that situation explains many of those cases of supposed liver-disease, in which we cannot detect any enlargement or any apparent organic disease of that viscus. The needle introduced under the abdominal parietes, (of course taking great care not to wound the peritoneum,) and a narcotic injection thrown in through it, will almost instantly relieve the pain. Another class of cases are pains about the groin. We very frequently find the pains in that situation; and females suffering from them have very often been treated, by mistake, for uterine disease when there was nothing of the kind. In several cases which have come under my own observation, the speculum has been forcibly introduced into the virgin vagina when the patient was suffering from nothing but neuralgia of the abdominal parietes; caustic has been employed, and the most severe treatment adopted, when the little instrument I will soon describe to you would have almost immediately relieved the pain.

“But the variety of neuralgia in which of all others I can predicate an immediate and marked success, is the trifacial neuralgia, and especially that species of it where the tender point is found at the supra-orbital foramen. The extent of surface affected here is often very limited; indeed, I have sometimes only succeeded in detecting it by pressing the point of a patent pencil-case into the foramen. When once it is discovered, however, the injection may be freely thrown into the foramen; and although in this situation the pain of the application is severe, yet the result is usually a speedy and most successful cure. Sometimes you will find the painful spot at the upper part of the side of the nose, where the infra-trochlear nerve emerges from the orbit. Here also the needle may be freely used. By the use of the injection in one or other or both of these places, the severe pain in the eyeball, so often complained of, is at once cured.

“I have already stated in the first paper I published on this subject (‘*Edinburgh Medical and Surgical Quarterly Journal*,’ April, 1855, p. 265,) how I was led to use this remedy. I had studied the book of M. Valleix with great interest soon after its publication, and found the plan of treatment which he recommends, viz., the application of several blisters over the tender points of the nerves, not nearly so

successful as he led me to expect, or as it might otherwise be thought to be. I then varied the application very much. I raised the blister, removed the cuticle, and applied morphia (both in a liquid form and as powder in ointment) on the surface, and found, contrary to the experience of Valleix, that the patient derived decided benefit from it. One remarkable case, many years ago, I cured by applying *nux vomica* to the blistered surface; but I never tried it again, for it seemed likely to kill two people: my patient, an old lady, who nearly died of the poison; and myself, then a young doctor, who nearly died of the fright. The application had a most remarkable effect, however, in curing the disease. The old lady lived for many years afterwards, and died of a different complaint altogether. Another method of treating such cases was to scarify the part and rub in morphia; but that was so brutal a method that you will not wonder that it was soon abandoned.

“Then came about a new method of treating aneurism, by introducing the acid solution of perchloride of iron. One day I happened to be using the ingenious instrument constructed by Mr. Ferguson, of Giltspur Street, for the purpose of introducing the preparation into a *nævus* on the head of a child, when it occurred to me that this was the very instrument I had been so long looking for, and the very thing for introducing narcotic injections in cases of neuralgia. I was not long in having an opportunity of testing its suitability. It was in the end of November, 1843, that I was sent for to see an old lady, upwards of eighty years of age, who had been kept from sleep for four or five days by a most violent attack of cervico-brachial neuralgia. This lady was an old patient of mine, and I knew she could not bear opium administered by the mouth in any form. We are too apt, I think, when we hear of these idiosyncrasies, to believe that they are mere imagination. In the case of this old lady, Dr. Davidson had seen her many years before, and treating her inability to take opium as a mere freak of the imagination, gave her twenty drops of laudanum. She had hardly taken the dose when she fell upon the floor in a fainting fit, so that I knew that there was no hope of getting her to take any opiate to procure sleep. I had a solution made of morphia in sherry wine, because I thought it would not irritate and smart so much as alcohol, and because it would not rust the instrument as a water solution of opium would do. I then introduced the needle into the tender part within the angle formed by the clavicle and acromion. In about five minutes the patient's eyes became injected, and looked just like the eyes of a drunken person, and she complained that her head was in a confused state. She soon afterwards fell asleep. The operation was performed about ten o'clock that night; and on calling next morning at eight o'clock, I was somewhat alarmed to find she had never awakened. She was very soon roused, however; but I determined never to use so much as thirty drops of solution of morphia (equal to the amount I had given her) in the case of a person at her time of life, unless I had previously tested its effect upon the system. This treatment quite cured the old lady of the neuralgic pains, which never returned.

"In Edinburgh, I may mention, the use of this instrument has become nearly universal, and the efficacy of the process is well known. I could narrate a vast number of cases in which it has proved eminently successful; but as details would be burdensome, I will only detain you with the mention of one or two.

"A lady, troubled with neuralgic pains, had been punctured upwards of one hundred times, always in different places; but no sooner had the pain been driven from one spot, than it took up its seat in another. At last, I had expelled it from every part of the body, except a corner of the head, and there I was puzzled how to deal with it. The fact was, I could detect no painful point in the scalp. I would impress upon you that the instrument is not to be put into the place where the patient complains of the pain, but into the spot where you find you can awaken the pain upon pressure. Well, I could find no pain by pressing upon any part. The lady's husband, a medical man, took her to the German baths, in the hope that they might furnish what was wanting to the cure. She resided there for several months, but without the slightest benefit; and at length her husband brought her back to me, saying he was satisfied, unless I could cure her, nobody else could. I twice examined the part of her head affected; once more, the second time, I succeeded in finding out the point where the needle should be inserted; introduced the instrument; and from that day she has never had a touch of neuralgia again, though she has suffered from rheumatic gout.

"Another lady, also the wife of a medical man, (and I take these cases, because on that account I am better able to get at the symptoms,) was suffering from very intense neuralgia in the forehead, which had lasted, at irregular intervals, for ten days. The pain was so severe that it rendered her completely useless. I at once inserted the needle; the pain became instantly relieved, and soon left entirely. Since then it has never returned.

"The question may be asked, but how does this process act? I do not think I am bound to answer that question. It would be a sad puzzle to many of us, I suspect, if we were asked how many other remedies which we use, act. We know the effect they produce; but often we are unable to tell why it is so. But I think there are various considerations which may help us to a conclusion on this question. One of these is, that we know that every disease has both a local and a general effect; and we know, also, that the local effect depends very much on the affinity between the particular medicine administered and the tissues to which it is applied.

"I believe the remedy I have been speaking of acts in two ways. First, the injection into the cellular tissue in the neighborhood of the nerve, the needle being charged with narcotic solution, affects the nerve. In the second place, I believe it acts by being passed into a part which rapidly absorbs the medicine, and sends it through the system, thus producing an almost instantaneous effect. In this little instrument we possess the means of bringing the patient almost directly under the influence of opium. It is truly astonishing to see how

rapidly it affects the system. If you throw in a large quantity, you will see the eyes immediately injected, and the patient narcotised; and in a few minutes afterwards you will see him in a profound sleep.

“One objection which may be brought against this process is the gastric disturbance it produces, bringing on a condition very similar to that caused by sea-sickness. *Nepenthe*, however, does not seem to produce so much sickness as opium, and is therefore preferable as an injection. Another risk connected with this remedy, and which requires to be avoided with great caution, is that, in the case of elderly people, the injection is apt to take a very strong effect. I have more than once been much frightened by the effect it produces on people advanced in life; though, I am thankful to say, I have never been nearer producing fatal results than in the case I mentioned to you. Another caution I would offer is, that you must choose the proper patient for the use of the remedy. A great many persons reading accounts of the process have run away with the idea that it can cure almost every possible pain in the human body. Lately, a lady, about thirty years of age, of an unhealthy constitution, came to me from the south of England to be cured of neuralgia. On examining her, I thought I could detect, from the appearance of her eye, the existence of fungus hæmatodes of the optic nerve, and sent her to an eminent oculist, who confirmed my opinion. Some time ago, an English nobleman came here to consult me about neuralgic pains with which he was affected. He had been much relieved by a person whom I had instructed in the use of the instrument, and came to me to be cured. From examining him, I found there was every reason to believe that there was some internal tumor pressing on the nerve, which created the neuralgia, and prevented its cure; and that tumor we could not remove. The pain he had to endure was of the most agonizing kind; I never saw any one bear pain with such resolution as he did; but I have seen him writhing in agony, have seen him at once relieved with the instrument, and immediately afterwards able to take a long walk. But, of course, so long as the tumor was there, the relief could only be temporary.

“The instrument is of the simplest construction, and is a modification of Mr. Ferguson’s already alluded to. It consists of a small glass syringe graduated like a drop measure, and to this is attached a small needle, hollow, and having an aperture near the point like the sting of a wasp. The painful point being ascertained, the syringe, being charged, is pressed firmly in to such a depth as to reach the nerve, when the piston being shoved home, the charge is delivered. No hæmorrhage follows; and, in the many cases in which I have operated, I have never seen any disagreeable local effects, except a slight blush of urticaria round the wound.”—*British Med. Journ. Medical Circular*.

Case of Cancerous Tumor treated by Chloride of Zinc. By JAMES ALEXANDER, Surgeon, Wooler.

The following case of cancer does not possess in itself any peculiar interest, and certainly cannot boast of having been successful in its result. But it affords an opportunity of detailing a mode of applying caustic to malignant growths, or indeed to tumors of any kind, when it is deemed advisable to have recourse to its use for their removal, not much known in this country, and which may perhaps be found as effectual as any other, while it is free from various objections on the score of tediousness and uncertainty of operation, as well as prolonged suffering, to which the ordinary methods of applying escharotic remedies are justly liable.

Three months ago a man presented himself to me for advice, with a large carcinomatous growth, occupying nearly the whole of the chin, and considerable part of the under lip. The tumor was beginning to fungate on some points where the skin had given way, and was covered with diseased integuments closely adherent to the mass below on the remainder of its surface, and was still moveable, but not freely, on the parts over which it lay. The patient informed me that a small ulcer had been cut out of the lower lip a few weeks before, but the tumor on the chin, which he represented as being then about the size of a small bird's egg, had been unfortunately left. Deep indurations could be felt along the rami of the lower jaw, immovably united to the bone, and the aspect of the countenance was unhealthy and cachectic. It seemed a most unpromising case to meddle with, and should perhaps have been altogether let alone. But the man was clamorous to be relieved, if possible, from the loathsome encumbrance on the chin, which emitted from the ulcerated parts an abundant and most offensive discharge. His friends were as eager as himself to have recourse to any means that offered the slightest prospect of even temporary alleviation; for of any ultimate benefit, they were most explicitly warned, there was not the faintest hope. It was therefore resolved to make an attempt to destroy the fungating mass by caustic; and I have much pleasure in acknowledging my obligations to Mr. Walker, (my assistant,) for suggesting to me the method of proceeding I am about to describe, which he had very recently seen employed in one of the Parisian hospitals.*

Two parts of fine arrow-root were mixed with one part of chloride of zinc; and while the paste which such a mixture forms was soft, from the addition of a little water it was rolled out into a thin sheet, and then divided into arrow-shaped pieces of about three inches long, each tapering to a fine point at one extremity, and rather less than a quarter of an inch broad at the other end. After drying, the paste becomes hard, and if the points are fine, the arrows are capable of overcoming a considerable resistance. After putting the patient under chloroform, a series of deep punctures were made round the circumference of the tumor with a narrow bistoury, and one of the arrows forcibly inserted into each immediately after it was made, where it was

* Mons. Maisonneuve. Hopital Nôtre Dame de la Pitié, Paris.

allowed to remain. In four days the whole growth was completely detached in one very large, black mass. The surface of the sore for a time looked clean and promising; by and by, however, it assumed an unhealthy appearance, and I cannot say that any permanent good resulted from the operation. The benefit derived in this particular case, however, is not the point to which I would solicit the attention of my professional brethren, but the manner of using the caustic, which I believe, though occasionally practised in France, has been little if at all employed in this country. To do it effectually, one or two precautions should be observed, which were suggested by the progress of this case; and if these are attended to, I am inclined to think they will secure the complete detachment of the part we wish to separate in half the time which was occupied in this case. The arrows should be introduced in considerable numbers, not more than an inch or three-quarters of an inch asunder; the points from the opposite sides should cross one another in the centre of the morbid growth, and they should be inserted as near the basis of the diseased parts as possible, as nearly as can be accomplished in the line of demarcation between the sound and unsound parts. The pain from this procedure, judging from the above case, was not by any means severe; for the man slept tolerably well the first night after the application of the remedy, and spoke and ate, and moved about freely, with little apparent suffering, much less, certainly, than I ever saw when caustic was applied to the surface; and undoubtedly the effect is very expeditiously produced, for the caustic being applied to the root, and not to the surface of the growth, its vitality is at once destroyed, and the separation is completed whenever the integument between the punctures yields to the lateral action of the arrows. I am no advocate for the use of caustic in the treatment of cancer; in common with the vast majority, if not the whole of the profession, I greatly prefer its removal by the knife. But there may be cases in which the feelings of the patient, or perhaps other circumstances, may compel us to have recourse to it; and when such cases do occur, I venture to submit to the consideration of my professional brethren the mode of proceeding I have now detailed.

Not very far from Wooler there lived till lately a person, a shepherd, who was reputed to possess a remedy—a secret one, of course—which destroyed cancerous growths;* and to this man, the people who either were or believed themselves afflicted with the disease, resorted in great numbers, and from immense distances. The basis of the remedy, there can be no doubt, was white arsenic, which was mixed with some acrid vegetables, so as to form a green powder, and this again was made into a paste, and applied to the sore or tumor. All that I have ever seen or heard of this practice goes to confirm the validity of the objections commonly entertained against the use of arsenical caustics, on the score of tediousness, uncertainty, and even risk of life from absorption of the poison; nor have I any idea that the opinion generally entertained by non-professional persons, of the greater perma-

* Since the death of the shepherd, his mantle is supposed to have descended on a brother, who is a gardener.

nence of cures effected by this means than by excision, is anything else than a popular delusion. I am not able to bring forward facts sufficient to enable me to speak with absolute confidence on this subject, however. I have had occasion to operate in six cases of cancer of the lower lip, which had been subjected to the shepherd's treatment, some of them of considerable size; but whether these were cases in which the disease had actually returned, or in which it had never been completely destroyed, I have great difficulty in saying. I never have seen, however, any of those frightful deposits of cancerous matter in other parts or distant organs that disappoint and shock one so much, occasionally, after operation, even in the lip.

Of cancer in the lip I know perfectly the history of thirty-four cases, on which I have operated: of these, six have returned and proved fatal, while twenty-eight have continued permanently cured. Of the cases that recurred, four had begun within eighteen months of the time of their excision; the other two were of longer standing. One of these two was an old and large cancer; the other was not of more than two years' duration, but had been deposited very rapidly through the whole texture of the lip. Of the twenty-eight that have continued permanently well, as far as I could collect from the patients themselves, fifteen or sixteen had lasted upwards of two years; some of them a great deal longer—a few, indeed, had attained a great size; the remainder were of more recent date. I have added these facts to this paper, because the numbers are sufficient to form an item in the statistics of this frightful disease. It is only by the careful collection of large numbers that statistics can be of any value; and I am most anxious, after a long professional life, to place on record any facts, however few and trifling, which, in the hands of other inquirers, possessed of greater opportunities, and of leisure, which I have never enjoyed, may contribute in any degree to the advancement of that art which I have at least loved well and followed laboriously.

Of cancer in the mamma I know of only two cases, during thirty-five years, in which the operation was followed by any permanent benefit. Of these, one an old woman of seventy, survived the excision of the breast nearly three years without any return; the other I operated on five years ago. The woman is in good health at this moment; but there is a tumor about the size of half a walnut in the armpit, which she says appeared about two years after the operation, but has continued quiet and stationary ever since.—*Edinburgh Med. Journal.*

Stomach Disorders connected with Tubercular Disease of the Lung. By
DR. GEORGE BUDD.

From a Lecture on this subject, in the Medical Times and Gazette for Aug. 7, we quote the following:

“Tubercular disease of the lung, and the inflammation it sets up, by irritation of the filaments of the pulmonary nerves, causes not only

cough, but reflex nervous disorder of the stomach, of which vomiting at the end of a fit of cough is commonly the first symptom. A similar extension of the spasmodic act occurs in whooping cough, where the paroxysm of cough frequently terminates in vomiting. Vomiting is often excited the same way—that is, by a reflected nervous influence—by causes of disturbance in other parts of the body. It is a common effect of inflammation of the brain, and occurs almost constantly during the passage of gall stones through the gall ducts, and during the passage of a urinary calculus from the kidney to the bladder.

“In phthisis, the irritation of the lung on which the vomiting primarily depends is persistent, and consequently the stomach disorder is persistent, or very apt to recur.

“Vomiting occurs more frequently, and other gastric disorder is more common in women than in men, because the nervous systems of women are more susceptible, and reflex nervous disorder of any kind is more readily excited by a given disturbance in them.

“In some cases of phthisis, the mere mechanical act of vomiting is excited; there is mere vomiting of food, or, if the stomach happens to be empty, dry retching.

“In other cases, the secreting apparatus of the stomach is excited by a reflex nervous influence to pour out large quantities of gastric acid, and much sour fluid is ejected from it.

“In the same way, inflammation of the brain, or the passage of a gall stone, not only excites the mechanical act of vomiting, but also, in some cases, a great outpouring of gastric acid.

“By untimely secretion and waste of gastric juice, the power of the stomach is exhausted; and when food is subsequently taken, before this power has been restored, there is an insufficient secretion of the solvent juice, and digestion is slow and imperfect. The food, when it has remained undigested a certain time, irritates the mucous membrane, renders the stomach tender and painful, and causes, by the frequent repetition of the same process, the inflammatory appearances which the lining membrane after death sometimes presents.

“In most lingering diseases the secretion of gastric juice ceases before death, and no post-mortem digestion of the coats of the stomach takes place; but in phthisis it often happens that, through untimely secretions of gastric acid, or in consequence of fermentative processes within it, the stomach at the time of death contains a digesting acid, and its coats after death become dissolved from within outwards to a degree which depends on the energy of this digestive fluid, and the temperature at which the body has been kept.

“When great fatty enlargement of the liver occurs, as it not unfrequently does in women, there may be, as I have already stated, another cause of disturbance; the pyloric end of the stomach may be compressed; the stomach may, in consequence, become enlarged; and then, superadded to the other forms of indigestion, are those which result from an impediment to the ready and complete emptying to the stomach through the pyloric opening.

“There are three classes of remedies available in the treatment of these stomach disorders, viz: sedatives, alkalies, and astringents. Where the cough is hard, and, as often happens at first, vomiting occurs only after hard fits of cough, the most effectual remedies are sedatives. Three or four minims of dilute hydrocyanic acid, or a twelfth of a grain of the muriate or acetate of morphia, three times a day, or these two medicines in combination, will often lessen the violence of the cough, and arrest the vomiting that depends upon it.

“If there be excessive secretion of gastric acid, or excessive acidity of the stomach from other conditions, hydrocyanic acid often fails to quiet the stomach, sometimes even renders the vomiting more frequent, and the vomiting may be checked for a time by alkalies—by fifteen minims of liquor potassæ, or by fifteen grains of the bicarbonate of potash or soda twice a day, an hour before meals.

“But, generally, where there is untimely and excessive secretion in the stomach, the most effectual remedies are astringents. Five grains of the trisnitrate of bismuth may be given three times a day, a quarter of an hour before meals, or ʒiiss. of infusion of logwood, or some other vegetable astringent.

“The vegetable astringents check excessive secretion in the stomach as they do in the bowels, and allay vomiting, that depends on excessive secretion, as they allay diarrhœa.

“Medicines of these different classes may often be given in combination with better effect than either may be given singly. Hydrocyanic acid, for example, may be given with advantage in combination with soda, or bismuth, when it cannot be given alone.

“Lime-water, which is at once alkaline and astringent, is often of much efficacy in these and similar cases.

“When vomiting occurs soon after meals; or when food, especially solid food, excites pain; when there is reason to believe that an inflammatory state of the stomach exists; the most effectual remedy is a light and easily digestible diet.

“A disposition to vomiting is always much increased by a costive state of the bowels, and it is therefore essential to obviate this by the occasional use, if need be, of some aperient that does not fret the stomach.

“I need hardly add, that recovery from these stomach disorders is promoted by whatever lessens the irritation in the lung on which they primarily depend.”

Opium Smoking.—Opium is not smoked in the same manner as tobacco. The pipe is a tube of nearly the length and thickness of an ordinary flute. Towards one end of it is fitted a bowl of baked clay or some other material, more or less precious, which is pierced with a hole communicating with the interior of the tube. The opium, which before smoking is in the form of a blackish viscous paste, is prepared in the following manner:—A portion of the size of a pea is put on a

needle, and heated over a lamp until it swells and acquires the requisite consistence. It is then placed over the hole in the bowl of the pipe, in the form of a little cone that has been previously pierced with a needle, so as to communicate with the interior of the tube. The opium is then brought to the flame of the lamp, and after three or four inspirations the little cone is entirely burnt, and all the smoke passes into the mouth of the smoker, who then rejects it again through his nostrils. Afterwards the same operation is repeated, so that this mode of smoking is extremely tedious. The Chinese prepare and smoke their opium lying down, sometimes on one side, sometimes on the other, saying that this is the most favorable position; and the smokers of distinction do not give themselves all the trouble of the operation, but have their pipes prepared for them.—*Le Huc's China*.

EDITORIAL AND MISCELLANEOUS.

— It is gratifying to all who appreciate the importance of paying attention to the laws of health, to know that the Committee appointed last winter by the Senate of the State, to inquire into the sanitary condition of the metropolis, has commenced its sessions. They are receiving the testimony of medical men upon the subject, and will, we trust, allow professional knowledge to have its proper weight. The immediate occasion of the appointment of this Committee by the Senate was the introduction of a bill for the regulation and improvement of the sanitary police of New York. This bill has several difficulties to contend with, not the least of which is, that it proposes to take the office of Health Warden from mere politicians, who are hungry for pay for service rendered, but know nothing of the laws of health, and give it to medical men, who cannot be more hungry, and do know what is necessary to be done to guard against the ravages of disease, and how to lessen the virulence of epidemics. Political parties do not care to divest themselves of authority to make these appointments, or to limit the class from which these offices shall be filled. The men who have carried the colors of the successful candidate through the fearful perils of the primary meeting, and adhered to them till the last vote is cast, must be paid, and it is pleasanter to let the state do this than to feel the draining of the private purse. To be sure, many a life is sacrificed to this policy, but politicians do not trouble themselves about such things. The bill before the Senate proposes to make it

the law that the whole of the health officers, from City Inspector down, shall be medical men.

But the bill is also opposed because it proposes to give to the health wardens very extensive powers of interfering with families when the small-pox has broken out in any locality. It authorizes very decided measures to be taken to cut off the communication of the attendants of the patient with the neighbors and others who may be unconsciously in the vicinity of the infection. But here the old feeling of sacredness of the domicile is appealed to by the opponents of the bill, as if this right were in immediate danger. It may be true that a man's house is his castle, but he has no right to loop-hole it, and commence shooting at whomsoever may be near him. In such a case, the gentlemen in blue would soon be knocking at his doors with their locust clubs, or if necessary, Major General Sandford would send to him a company of the famous "7th Regiment." Why, then, should a man claim a right to make his house an inviolable sanctuary when he harbors in it a pestilence even more dangerous than guns. The notion is absurd, though sophists may make it plausible.

It is from the fact that large cities are the constant nurseries of small-pox that we are satisfied that our *state* authorities have a right to interfere in this matter of sanitary regulations in this city. Self-preservation demands that the man in the remotest part of the state should have a right to say, you shall not harbor this pestilence to scatter it among us unseen. The love of the great dollar leads men to import it in rags, or to conceal it in clothes that should have been burned, or to hide it when it seizes on the infant; and the same love sends it out intensified a hundred times upon every line of railway and through every channel of commerce. If the evil is to be effectually stayed, it must be by cutting off the sources which supply it. If the horrid brood is to be destroyed, it must be by breaking up its nests thoroughly and effectually; and to do this sufficient authority must be given to fit persons.

The neglect of vaccination, which, though it does not give absolute immunity, is a great protection, is a crying evil, which must be remedied elsewhere. The number of persons who in this city die from small-pox in its unmitigated form is astonishing. They are not for the most part those who have been brought up in cities, but those whose early life has been passed in more retired places, who have lived where it was never known that a case of small-pox occurred, and who do not fear so distant an evil. But when arrived at mature years, business or pleasure calls them to a city, and without thinking of their

danger, they take no steps to defend themselves, discovering only too late that they have encountered the pestilence. Moreover, vaccination is often very imperfectly done. Sometimes this is the physician's fault, oftener it is the fault of the parent, who, to save the merest trifle of money, ventures to assume the responsibility of performing the operation. An old needle the instrument, and some matter from the arm of another child, are sufficient to produce a sore which is all that is expected, no regard being paid to its characteristics, of which indeed the parent knows nothing. And so the child gets on through life, showing a scar on his arm and trusting to the protection of this vaccination, only learning his mistake when it is too late. We recall at this moment a college friend, who having become a clergyman, with a parish warmly attached to him, and a young family dependent on his exertions, seemed to be filling the measure of usefulness, but being absent from home in the interests of his people, was suddenly taken sick and sent for us to visit him. The mark of the pestilence was on his forehead, and so plainly written that it had been read correctly by a female relative. "How comes it, S.," we said, "that you were not vaccinated." He thought he was, and showed us a scar which he had believed to be his mark of protection. It was that of a sore which could give no more protection from small-pox than a boil. And so he was cut off in the midst of his years and of his usefulness.

No man is safe anywhere from small-pox if he is not vaccinated. Farmer X. may live in his quiet homestead, away from the routes of travel, but he wishes to buy a pair of oxen, and to save time in going to see them, travels a short distance on a railroad. He enters a car, and when he leaves it fifteen minutes later has received the contamination of this fearful disease from his neighbor in the chair which he occupied. Or his good wife gives a cup of milk to some weary wanderer that pauses at her door, and in return finds, when too late, that he bore this plague with him. These are not fancy sketches, but are drawn from life—and are sufficiently striking.

There is an impression very commonly entertained that the protective power of the vaccine virus runs out in every period of seven years. This impression may very wisely be encouraged, for the instances are so many in which persons think themselves protected when they are not; that their safety requires the renewal of the operation, and to this they can by no other argument be easily induced to submit.

A curious fact was elicited by some inquiries made last winter in this city, upon this topic, which will serve still further to illustrate the necessity of careful vaccination. Within a dozen years there has arisen

to be an immense trade in ready-made clothing of all kinds, from the coarsest to the finest. Most of this is made up at the homes of the operatives, the cutting only being done at the shop of the dealers. Now, if John Needle is poor and his family depend on his daily labor, he would be something more or less than human if he should mention to his employers, Small Profits & Co., that he has a child or two who are down with small-pox, for they would refuse to give him any work. He says nothing at all about it, but carrying home his bundle, stitches away upon the fine coat in all the intervals he can find from attending to the wants of his little ones. The air saturates the coat, so that when it is returned to the shop it is a magazine of disease. Small Profits & Co. with their salesmen, are all carefully vaccinated, and do not receive any injury from the infection. The garment is sold and carried to Retiredville, where it is purchased by Esquire Assemblyman, the most prominent and influential person in town. But Esq. A. has not believed that he is in any danger of taking the small-pox, and always laughs at Dr. Careful when he proposes to repeat the vaccination, saying, Ah, Doctor, you want a fee to-day! But one Sunday he goes to church with his new coat on, and a fortnight afterwards prayers are read for his family in affliction. While all the town wonders how "Esquire A." took the small-pox."

If our legislators could realize that in this and many other ways they are endangered by the neglect of the persons who nominally have in charge the protection of the public health, we are sure that they would see where their interests and safety lay, and rising above party considerations, would support this proposition to place the charge of these important matters in the hands of medical men.

— We gave last month a mere outline of the great facilities for clinical instruction furnished by the public and private teachers of this city, and also the many public charities open to the student, with which New York abounds. Since then, the several schools of medicine have commenced their regular courses, and are now fully embarked in the winter's instruction. We understand that the indications at this early period of the session are unusually promising for a large class.

The course of clinical lectures to be delivered at the Bellevue Hospital by the Medical Board of that institution, was commenced on Monday, the 18th October, at 1 o'clock, by an introductory from Dr. Francis, the President of the Board. A large number of medical men and students crowded the new amphitheatre to listen to this distinguished member of our profession. Although in his sixty-ninth year,

Dr. Francis rivals the most diligent student in his enthusiasm for his profession, and his labors for its advancement.

The lecture was in a great measure historical, treating of the rise of clinical instruction in England and this country, and was rendered extremely interesting by short biographical sketches of the teachers when the doctor was a student, whose names are now classical in medical literature.

After the lecture, Dr. J. R. Wood operated upon a female for disease of the inferior maxilla, which required the removal of the whole bone; and also upon one half of the superior maxilla in a man.

The new amphitheatre in which these operations were performed is the best for clinical purposes that we have ever seen. Every person not immediately engaged in the operation could be seated, and yet see the operation in all of its details. Students who have strained their necks and supported the weight of fellow students at such operations, will appreciate the wisdom which has been displayed in the erection of this amphitheatre.

The evening of the same day, October 18th, Prof. A. C. Post delivered an interesting lecture introductory to the course at the University Medical College. At the same time, Prof. Willard Parker gave the introductory at the College of Physicians and Surgeons. Both of these lectures were attended by a crowded assembly of physicians and students. We should be glad to give an abstract of these addresses, did opportunity permit.

The course at the New York Medical College commenced October 19, by a lecture from Prof. R. O. Doremus. His subject was that of Attraction, and was illustrated by many brilliant and pleasing experiments, the apparatus of his well-appointed laboratory enabling him to demonstrate his subject in the most successful manner. The chemical lecture room in which the lecture was delivered was crowded.

— At a regular meeting of the Academy of Medicine, in October, the discussion of Puerperal Fever was resumed. Dr. Barker continued his remarks, and was followed by Dr. Gardner. We are enabled to present the full report of this discussion to our readers in this number of the MONTHLY. The discussion is still open, but it is not probable that it will be continued by any other member of the Academy, Dr. Clark having signified that he should rest his remarks where he had left them at a previous session.

The Section on Public Health and Legal Medicine made an informal report on the present sanitary condition of New York, and asked for the appointment of a special committee to assist them in investigating this subject. The committee was appointed by the chair.

At an extra session of the Academy, October 20, called to consider the "New Constitution," this document, after a lengthy debate, was, with a few slight modifications, adopted. The principal points in which it differs from the *old* one, are, that every candidate must be proposed by *three* Fellows *personally acquainted with him*; that the President shall be elected for *two* years; the Vice-President, the Secretaries, and the Treasurer, for *three* years, and the Trustees for *five* years. A Council is added to the governing power of the Academy, which is to consist of the above-named officers and the chairmen of the three standing committees—on Admission, Medical Ethics, and Medical Education—which are composed of five members each, and elected for five years. Heretofore all officers were elected for *one* year.

The duties of the Council seem to be very various. Among the list we find "that they shall appoint the Librarian and Assistant Secretary, (who, however, is nominated by the Recording Secretary;) they shall nominate such Fellows as are to be appointed to deliver series of discourses or lectures on scientific subjects before the Academy, and also a Fellow to deliver the Anniversary Address."

The Annual Assessment by this Constitution is raised to Five Dollars.

It goes into effect after the regular meeting in November. The first meeting then under the New Constitution, will be the third Wednesday in November, (17,) when the Anniversary Address will be delivered. Dr. E. R. Peaslee is the orator this year, elected by the vote of the Society under the Old Constitution.

From a review of a work on Clinical Teaching in Germany, and especially in Vienna, by Dr. Gallarvardin, in the *Edinburgh Medical Journal*, we extract the following sketch, a pen and ink portrait of the celebrated Skoda—the very type "of the spirit and tendencies of the Vienna School."

"That which constitutes the originality of Skoda among all the clinical teachers of Germany, and which has made for him so universal a reputation, is his skepticism. In medicine there has been rarely seen, if ever, a *doubter* so absolute, so fervent; for his is no *theoretical* skepticism (which is a very common thing,) but a *practical* skepticism, which he actively propagates both by his teaching and through the writings of his pupils, and by its application at the bedsides of the sick. Thus from his name any physician who neither believes in, nor practices any form of therapeutics, is termed *Scodist*. *Scodism* among the Germans is Pyrrhonism in medicine. We would lay long odds that our reader could never divine the remedy which Skoda applies at the bedside. Every year, during nine or ten months of clinical lessons, he employs on his twenty-eight sick—*patients* they may indeed be

called—in *succession* all the most classical, most celebrated means of cure, and do you know with what intention? Simply to convince his pupils that all these medications are always and completely *inefficient*. If by chance—*chance* is indeed the term to use here—if on any treatment there supervenes a prompt and very marked amelioration, he attributes all the honor to the natural course of the disease. Example:

“A young man of nineteen, very robust, comes into the hospital on the 11th May, on account of a pneumonia of the right lung, of a highly inflammatory and severe form.

“On the 13th and 14th, Skoda causes him to take infusion of foxglove, which induces six stools a day.

“On the 15th a pound of blood is drawn from the arm by his orders.

“Next day, the 16th, the pulse, which on the preceding evening was at 106, falls to 66.

“To explain so notable and prompt a modification of the pulse, Skoda expresses himself in these terms: ‘Perhaps it is the effect of the bleeding, such things have been seen; perhaps, too, it may have been the effect of the foxglove, that has been seen too; it may also be considered as connected with the natural evolution of the disease, that has been seen too.’ Skoda reasons habitually after this fashion, never denying in a very decided manner. In this way, little by little, he *insinuates* doubt into the minds of his disciples, all the more surely that he does not insist on its reception; so that finally these come insensibly to lose all practical faith—to raze from their medical vocabulary the word *causality*, just as their master does.

“Skoda is of the *young school*. Thus we have never heard him quote a single physician who flourished before the first years of the present century, and of course, *a fortiori*, he never cites any physician of antiquity. He thinks it perfectly useless to know how the problems of philosophical and practical medicine, always the same, at all times and in all places, having always for their subject ‘man sick,’—how these problems, we say, have been agitated, and resolved by Hippocrates, Galen, Baglivi, Stahl, Boerhaave,—nay, even by the men who shed lustre on the school of Vienna, Van Swieten, Stoll, Hildenbrand, J. P. and Joseph Franck.”

Excretion of Arsenic and Antimony in the Urine.—Dr. Kletzinsky, as the result of his investigations upon the expulsion of metals in the secretions, comes to the following conclusions:—1. The presence of a small quantity of albumen in arsenical urine is indubitable, but it is problematical in antimonial urine. The excretion of both metals may take place in the form of their alkaline salts. 2. The excretion takes place a short time after poisoning by arsenic, more quickly than in antimony poisoning, and continues uninterruptedly until death or recovery—the excretion of antimony continuing usually longer than that of arsenic. 3. That in its forensic relation the analysis of the urine in arsenic or antimony poisonings, providing the patient live for from twelve to twenty-four hours, is capable of furnishing a complete negative or positive conclusion.—*Wien Wochenschrift*, No. 8. *Times and Gazette*.

STATISTICS OF SUICIDE.—Mr. Buckle has asserted, in his able and interesting recent work on "Civilization," that the number of suicides is a "constant quantity;" in other words, that suicides, like other so-called "crimes," occur very regularly. In the five years, 1852-56, it is shown by the Registrar-General that 5,415 persons put a period to their earthly career by self-destruction, viz: 3,886 males and 1,529 females. The annual average of male suicides is 777.2, and that of females 305.8. The general average shows that upwards of 1,000 persons (1,083.0) put an end to their sufferings by committing suicide in every year of grace. The lowest number of suicides was 1,031 (in 1853), and the highest 1,182 (in 1856). Poisoning being the easiest, is a common, but by no means a general means of self-destruction. The favorite poisons are arsenic, opium, laudanum, prussic acid, and essential oil of bitter almonds. It is a remarkable fact that female suicides manifest a strange predilection for the very painful, irritant poison, called oxalic acid. As many as 34 were so foolish as to choose this compound of oxygen and carbon, while only 15 males resorted to it. On the other hand, 67 men resorted to hydrocyanic acid and 33 to the oil of bitter almonds, while only 8 women had resolution to swallow the former fatal poison, and 18 the latter. Strychnia was used by one man and one woman, and in one case camphor was used. But hanging is by far the most general mode of suicide, for nearly half of the annual average of suicides terminate their miserable lives by suspension. Cut-throats and drowning stand next in the order of frequency; 8-10th of all the suicides are committed in one of these three ways. Asphyxia proper, or suffocation by the fumes of charcoal, is by no means a favorite mode of suicide here as in France. The greatest number of suicides occur between the ages of 35 and 45. Thirty-three persons, of both sexes, committed suicide at 10 years of age, and 14 persons of both sexes at the age of 85.—*Ib.*

Treatment of Prolapsus Uteri by Medicines given internally.—Dr. Bonorden observes that as prolapsus uteri usually arises from hypertrophy of the organ and a relaxed state of the round and broad ligaments, the indications are to remove the hypertrophied condition, and to strengthen the ligaments. In two cases he has been enabled to completely fulfill them by internal remedies. He administered twenty drops of the *tr. ferri. mur.* morning and evening, giving with the evening dose also three gr. of *secale cornut* and ten gr. of *gum galbanum*, the external parts of generation being well rubbed several times a day with Hofmann's *balsamum vitæ*. At night, the patients were directed to lay with the pelvis somewhat raised. The *secale* was continued for fourteen nights, next alternate nights, and then a while at longer periods.—*Berlin Med. Zeit. Times and Gazette.*

Treatment of Uterine Hæmorrhage.—Dr. Wittcke strongly recommends the application to the whole abdomen of cloths or handkerchiefs well moistened with a lotion composed of weak spt. menth. pip., spt. cinnam. ää ʒvj. aceti ʒviii. At first, they excite a marked impression of cold, to keep up which they have to be reapplied every five minutes. During the second hour, as a general rule, they should be changed

only every ten or fifteen minutes. The womb contracts powerfully, the bleeding and faintness cease, and after the application has been continued for six or eight hours, a general warm sweat breaks out, which is a sign that all danger is over. With these applications are occasionally combined two or three doses of a powder consisting of secale and cinnamon ää five grs. If the spirit is not at hand, to a pint of infusion of peppermint may be added half a pint of vinegar, and the same of spirits of wine. On an emergency, too, we may mix one part of water with half of spirit and half of vinegar; but the restoration of strength and the sweating are not so readily produced.—*Ibid*, No. 12.

—Died at Bolivar, Venezuela, on Friday, September 17th, David Uhl, M.D., of New York.

Our older subscribers will remember several articles which have appeared in our pages from the pen of Dr. Uhl, whose death we have thus recorded. The topics which most frequently were the subjects of his essays pertained to medical jurisprudence, more particularly in reference to the practical parts of the science, as the methods of conducting investigations which required medico-legal knowledge. A pretty extensive experience of the difficulties which arise in apparently simple cases, had been afforded to him by his connection with the Coroner's office in this city, and was the basis of his papers. During the autumn of 1854, he lectured on the same subjects at the New York Medical College, repeating his course the subsequent year, and always to the gratification of his classes.

Dr. Uhl was a man of good talents and of great industry, and though wanting a classical education, he was a clear and accurate writer. Though young, his diligence was making itself felt in his professional progress, and his position was constantly improving. His connection with the Cunningham Burdell affair was unfortunate. Having without any desire on his part been made acquainted with the purpose to commit a gross fraud, he at once consulted those who should have been wise counsellors, as to his duty in the case; and when these all agreed, determined to follow their advice, though he foresaw that it might be used by some to his disadvantage. The outcry which was raised against his course by the friends of the accused, in order to draw attention from her, was, however, not anticipated, and he was mortified to find that many members of the profession were blinded by these sophisms. In disgust, he determined to remove from this city, and an opportunity presenting itself to him to visit Venezuela, he embraced it, sailing for that country last summer. We are not informed, but it is probable, that he fell a victim to the malarious fever of the region.

— In a recent case of alleged murder by poisoning in this city, the body of a female was disinterred a year after death, and subjected to the strictest chemical analysis. Prof. Doremus, assisted by Drs. Zenker and Budd, examined the *entire body* and found arsenic in notable quantities. The character of this examination, in its extent, minuteness, and accuracy, has attracted much attention from analytical chemists.

— Dr. Boyd, Health Officer of the City of Brooklyn, reports 22 cases of Yellow Fever as having occurred in that city during the past summer.

Books and Pamphlets received.

Report on the Vital Statistics of the United States, made to the Mutual Life Insurance Company of New York. By James Wynne, M.D., &c. New York: H. Balliere. 1857.

Concentrated Organic Medicines: Being a Practical Exposition of the Therapeutic Properties and Clinical employment of the combined proximate medicinal constituents of Indigenous and Foreign Plants. By Grover Coe, M.D. Published by B. Keith & Co. New York: 1858.

A System of Human Anatomy, General and Special. By Erasmus Wilson, F.R.S., &c. A New and Improved American Edition, from an Enlarged London Edition. Edited by William H. Gobrecht, M.D., &c., with 397 Illustrations on Wood. Philadelphia: Blanchard & Lea. 1858.

Lectures on the Principles and Practice of Physic. By Thomas Watson, M.D. A new American from the last and Enlarged Revised English Edition, with additions by D. Francis Condie, M.D., &c., with 185 Illustrations on Wood. Philadelphia: Blanchard & Lea. 1858.

A Course of Lectures of Obstetrics. By Wm. Tyler Smith, M.D., &c.; with an Introductory Lecture on the History of the Art of Midwifery, and Copious Practical Annotations. By Augustus K. Gardner, M.D., &c. 212 Engravings. New York: Robert M. De Witt. 1858.

Selections from Favorite Prescriptions of Living American Practitioners. By Horace Green, M.D., LL.D., &c. New York: Wiley & Halsted. 1858.

Diseases of the Urinary Organs. A Compendium of their Diagnosis, Pathology and Treatment. By William Wallace Morland, M.D., &c. Philadelphia: Blanchard & Lea. 1858.

Illustrations of Typhus Fever in Great Britain, the result of Personal Observations made in the Summer of 1853, with some remarks as to its Origin, Habits, Symptoms and Pathology. By J. B. Upham, M.D., &c. Boston: David Clapp. 1858.

An Examination of the Question of Anæsthesia, arising on the Memorial of Charles Thomas Wells, presented to the United States Senate, &c. By the Hon. Truman Smith, U. S. Senator from Connecticut. New York: 1858.

Transactions of the Third Session of the Medical Society of the State of California, convened at San Francisco, February, 1858. Sacramento: 1858.

THE AMERICAN MEDICAL MONTHLY.

DECEMBER, 1858.

ESSAYS, MONOGRAPHS, AND CASES.

Removal of the Placenta in the Early Months of Pregnancy by Evulsion. By O. C. GIBBS, M.D., Frewsbury, Chautauque Co., N. Y.

In the discussion of this subject before the New York Academy of Medicine, as reported for and published in the October No. of the MONTHLY, several obstetricians expressed the opinion that instrumental delivery of the placenta after abortion, even in alarming cases of hæmorrhage, was unsafe and unnecessary.

To take part in a discussion in which men of such extensive experience and wide-spread reputation have participated—men whose opinions are so worthy of respect and confidence as are Drs. Barker, Gardner, Hubbard, Sewall, Underhill, &c., may seem like the height of presumption on our part. But, holding to some opinions of a positive character upon this subject, we trust we shall be exempted from the charge of egotism in giving them expression, though our field of observation may be more limited than that of another man who may hold opposite opinions.

We would preface our remarks by saying that our opinions do not differ materially from those of Dr. A. K. Gardner, as at different times expressed. We might differ in the choice of instruments; also, perhaps, as to the time for their use. But more of this further on.

Uterine hæmorrhage, if considerable, is always a source of anxiety,

danger and alarm, and never more so than when it succeeds delivery, whether mature or premature. In such cases, it retards recovery, endangers life, and is often the immediate cause of death.

This last statement, we presume, will not be denied, for it is too well known that deaths from hæmorrhage after labor or abortion are by no means infrequent, and when death is not the direct result, from loss of blood, the patient is frequently so prostrated as to be many months in recovering perfectly, and often other diseases are superinduced, leading more remotely to the grave. Dr. Thomas F. Cock, of New York, says, "such hæmorrhages are of importance, because, in *many cases*, they have proved fatal; and their treatment demands some peculiarities beyond that usually pursued in flooding." (See *New York Journal of Medicine*, July, 1857.) Hence the importance of fully understanding the causes of such hæmorrhages and their most appropriate methods of treatment.

Dr. Gardner has truly said, "there is no time for vacillation in opinion or action; no time to run home to hunt up some method of treatment. The surgeon, if he finds himself at fault in his anatomy, while an assistant compresses the artery, may turn to his manual for light respecting the course of an artery, but in the floodings of the parturient there can be no temporizing." (See *American Medical Monthly*, vol. iii., p. 420.)

It is not infrequently the case, that in the early months of pregnancy the uterus expels the fœtus, while the placenta is retained, but partially detached from the uterine walls, in which event excessive hæmorrhage is an accident of difficult prevention. In all such cases as have fallen under our observation, the hæmorrhage has immediately ceased on the complete detachment and removal of the placenta. The question now under consideration, is whether hæmorrhage under such circumstances shall be arrested beyond the probable contingency of a return, *by an immediate removal of the placenta with instrumental aid, if need be*, or whether the case shall be trusted to those uncertain remedies, styptics and the tampon, aided by time and the recumbent posture? In our ten years of rather limited comparative experience, in cases of alarming uterine hæmorrhages following abortion, we have lost no time in detaching and removing the placenta, and we have seen no reason to regret our course.

Even in cases of hæmorrhage before the uterus has expelled the ovum, *where the life of the patient is in jeopardy, and all hopes of saving the life of the embryo have vanished*, we have not hesitated to separate the embryo from all vascular connection with the uterus, and remove

the products of conception; in which event the hæmorrhage has invariably ceased. The propriety of this latter course is not at present under consideration; we have simply to deal with a partially detached and retained placenta. In such cases, how shall the removal be accomplished? We answer, *with the fingers if it can be, with instruments if we must*. What are the objections to such removal? No one hesitates to introduce the hand into the womb to accomplish turning, or to remove an attached placenta at full term. The irritation produced by the introduction of a suitable instrument to remove a retained placenta following abortion in the earlier months, is much less than that caused by the introduction of the hand at full term, and infinitely less than that caused by the disintegration and decay of the retained placenta. For the last eighteen months, the instrument which we have used is that described and figured by Dr. Carey, of Dayton, Ohio, in the *American Medical Monthly*, vol. vii., p. 4, and subsequently in the *Western Lancet*, vol. xviii., p. 276. Though designed for the removal of the ovum, in cases of necessity, it is decidedly the best and safest instrument we ever used for the removal of the secundines. We certainly prefer this instrument to the "crotchet" of Dr. Dewees, or the "placental forceps" of Dr. Henry Bond. In regard to the propriety of the removal of the secundines after abortion, we might cite various high authorities, but we will content ourselves simply with quoting Dr. Churchill. He says, "if the foetus alone be expelled, we may wait a while, (*if no flooding occurs,*) to see if the uterine efforts will not detach the secundines; if not, perhaps we may be able to reach the lower portion of them with the finger, and gradually withdraw them; if this fail, we may frequently succeed with the ergot of rye. But there are many cases in which none of these plans will succeed. Are we then to leave the case to nature? We know that after a time the shell of the ovum will putrefy, dissolve, and be discharged; but experience too often proves that this process involves considerable danger; danger of hæmorrhage first, and afterwards of uterine phlebitis. With regard to the danger of uterine phlebitis from absorption of a putrid ovum, it is sufficiently imminent to warrant interference if we are called early enough." Dr. Churchill does not recommend, but rather reprobates the use of instruments for the removal of the secundines, when the same benefits can be obtained by the fingers, as perhaps first recommended by Dr. Wainwright. Upon what grounds this reprobation is made we cannot conceive, for the judicious use of a proper instrument will produce as little, if not less disturbance, as the necessary manipulations of the fingers within the uterus. We are

tempted to quote here a remark by Dr. A. K. Gardner, in an able paper upon uterine hæmorrhage: "How shall the small and fragile placenta be seized hold of and withdrawn? Some have recommended the introduction of one finger into the uterus and bringing down one edge of the placenta, and twisting it round and round, not only thus to detach the entire mass, but to also so shape it that it may the more easily pass through the os. Where this can be done, by all means do so! But it should be remembered, that in the great mass of cases it is impossible to reach the os so as to pass one finger into the cavity; far less to effect any good result, if it arrive there, to say nothing of the utter impossibility of aiding the finger with the thumb of the same hand." (See *American Medical Monthly*, vol. iii., p. 441.)

We propose to give two cases; the first and last in which we have used Dr. Carey's instrument, which will fully illustrate the time and the circumstances when and in which we seek instrumental aid. The first case has been previously reported, but it none the less subserves our present purpose.

CASE I. June 18th, 1857, we were called to see Mrs. M., aged 40 years. We found her sitting up, and she said she was feeling very well. A few hours before, she had miscarried, at three and a half months, with but trifling pain and no hæmorrhage. She had previously borne several children, the youngest of which was now ten years of age. The placenta had not come away, and it was on that account that she sought medical aid. On examining the case per vaginam, we traced the slender cord within the uterus. Mrs. M. was a very fleshy woman, of firm muscle, and the soft parts not having been distended by the passage of a full-grown child, resisted the introduction of the hand into the vagina. Pressing the hand firmly up, we could just introduce the end of the finger within the os uteri, but not sufficient to reach the placenta, or with the finger to depress the uterus. In our efforts at extraction, the slender placental cord was broken, after which the womb seemed to float before the finger, and all further efforts at extraction, with unaided fingers, were utterly useless. There was no hæmorrhage, and consequently no necessity for immediate action, but because of the extreme anxiety on the part of the patient to have the placenta removed immediately, and because our business would call us daily, for a few days, some ten or twelve miles away, were the above mentioned efforts made at extraction. We now gave ergot in full and repeated doses, utterly without effect. We now left our case as we found it, instructing the friends to lose no time in sending for us should hæmorrhage occur.

We had no idea of abandoning the case wholly to nature. Dr. Huston, of Philadelphia, says, "time, rest and opium are the grand remedies in abortion, for which there are no substitutes." We were disposed to give the patient the benefit of all these, while we took a little "time" ourselves to prepare for an emergency, which we had every reason to expect would soon come. We instructed our friend Fox, an ingenious gunsmith, to make an instrument, immediately, after Dr. Carey's model, which instrument was held in reserve for future use, when the urgency of the symptoms should demand active interference. During the night of the third day we were summoned, in great haste, to the bed side of our patient, who was reported as flowing profusely. Residing two miles away, of course some little time elapsed from the commencement of flowing to the time of our arrival. We went to the case with considerable misgiving; patient and persevering efforts for extracting the secundines had been fruitlessly made with unaided hands; no better result could be expected from a repetition of the effort, and we had yet to learn what confidence could be placed in the instrument which we were now prepared to bring to our aid. It was true, we could resort to the tampon, but this would only protract the case; it would not remove the placenta, nor insure against a recurrence of the hæmorrhage on its removal. We found our patient almost senseless and pulseless from loss of blood, and friends were weeping in an agony of grief at the prospects of her immediate dissolution. A dose of camphor and brandy was administered immediately, and we sat down to our patient without delay. The vagina was emptied of clots, and the hand was pressed firmly up, until the end of the finger reached the os uteri. Carey's instrument was now passed up, guided by the finger, until the claw entered the os; it was now turned to the one side, with the intention of bringing its convexity in immediate contact with the uterine walls, and then gently carried up to the fundus. From this position the instrument was made to sweep the entire cavity of the uterus, carefully keeping the polished surface of the convexity of the claw facing towards its walls. The instrument was now turned on its long axis and carefully brought down; the placenta was immediately felt in contact with the end of the finger, which was still kept in the os; with the finger acting as one blade of a pair of forceps, and the claw of the instrument as the other, the placenta was grasped and at once removed. The hæmorrhage immediately ceased, and the patient made a good recovery. Though the time was not accurately noted, it is presumed the placenta was removed in less than two minutes from the time of sitting down

to the patient. (See a former paper of ours in the *Western Lancet*, vol. xviii., p. 645.)

CASE II. October 10th, 1858, was called to see Mrs. B., a feeble woman of nervous temperament. She was deadly pale and almost pulseless from loss of blood. She had been flowing more or less profusely for the last three days, and had been attended, because of our absence, by Dr. Boyd. Ergot, acetate of lead, opium, gallic acid, and the tampon, had all been used with no permanent effect. The patient was supposed to be about six weeks pregnant, and, from the amount and persistency of the hæmorrhage, all hopes of saving the life of the ovum was abandoned. As soon as these facts were ascertained, we sat down to the patient, emptied the vagina of clots of blood, passed the finger to the os uteri, and then, along the finger, passed Dr. Carey's instrument into the uterus, and with the same manipulation as before described, the ovum was removed. The hæmorrhage immediately ceased, and the patient made a good and speedy recovery.

In the discussion before the Academy of Medicine, as reported in the October No. of the MONTHLY, several gentlemen present deprecated the use of instruments, while they commended the use of the tampon as safe and reliable; all, however, agree in the desirability of immediately removing the secundines, where hæmorrhage is profuse. We are disposed to question both the safety and reliability of the tampon. First, it is not reliable, because it does not remove the cause of the hæmorrhage, which is liable to recur at each removal of the tampon; neither does it perfectly and promptly arrest hæmorrhage, for, however thoroughly the vagina may be plugged, it is still capable of containing more or less blood, and often hæmorrhage will continue until the uterus is distended to the size which it had attained previous to the occurrence of abortion. Second, it is not always safe; for if the patient has flooded until there is imminent danger of immediate death, the cavity of the womb will not infrequently continue to receive blood, after the introduction of the tampon, quite sufficient to greatly enhance the danger, if not to prove actually fatal. It is needless to say that there is always an uncertainty attending the final removal of the tampon, and danger attending its too long use. There is always a liability of uterine inflammation from the presence of the placenta and clot in the uterus, and of phlebitis from the absorption of pus during the process of putrefaction.

Other members present preferred to trust the expulsion of the placenta to the influence of ergot. In the first case above reported, ergot

signally failed, and this was not the first time we have seen it do so, when our anxiety was wrought to the highest pitch by the imminence of the danger. Others have been so often disappointed, under like circumstances, as to doubt its influence entirely in promoting uterine contractions.

For ourselves, we do not doubt that a good article of ergot, when properly administered, will increase the force of uterine contractions in cases of labor, at the full term of uterine gestation. We would, however, say, that our experience justifies the conclusion that there is a difference between *increasing* the force of uterine contractions, when such contractions already exist, at the normal terminus of the gestation period, and in *originating* contractions, when nature is not making normal efforts in the same direction. Dr. Huston says, "the use of the ergot of rye, under these circumstances, is not without inconvenience," for it increases pain and nervous excitement, which are not infrequent and unpleasant attendants in these cases. Dr. Budd objects to the administration of ergot after severe hemorrhage, "as he has often found it a direct sedative." We presume that others have observed the same sedative action. The following is a case in point: Mrs. R., aged about 35 years, a widow, in very feeble health, has for several years been subject to occasional and profuse uterine hæmorrhages. She has received treatment at the hands of several physicians, with no permanent good effect. Four days ago, October 22d, we were called, in the absence of her attending physician, to prescribe. She was flowing profusely, and was very faint and quite exhausted. A diligent search discovered no cause of the hæmorrhage. Suffice it for our present purpose to say, that the tampon was used; cold water was injected into the bowels; acetate of lead and opium, gallic acid and turpentine, were administered by the mouth. The hæmorrhage would return with each removal of the tampon, though, it is true, less actively than at first. Yesterday morning the hæmorrhage began to increase again; the tampon, saturated in a strong solution of alum, was applied. We left two doses of fresh ergot (one drachm each), with directions that one be taken immediately, the other after an interval of six hours. Nothing else was advised. We were called to the case at nine o'clock last night, and found our patient complaining of universal numbness, and a deathly faintness at the stomach, similar to that which a large dose of opium will produce; yet we were assured that none had been taken. The pulse was reduced from one hundred to sixty, and the surface of the body was covered with a cold, clammy sweat. It is proper to say, there had been no hæmorrhage

since morning. From her feelings, the patient was positive internal hæmorrhage was going on. Quinine, with the compound aromatic powder, was administered in repeated doses, and to-day the patient is much improved.

We have reported this case simply to illustrate the depressing effect of ergot, which, in some cases, might enhance the danger of death.

Dr. Barker says the tampon in his hands, while it stays the blood for the present, excites uterine contractions, which expel the placenta when the tampon is removed. The tampon will not excite contractions unless placed within the cervix. It is true that the tampon should always be placed there; but our observations lead us to the conclusion that the vagina is its more general seat.

We fully concur with Dr. Barker when he says, "there is no question as to the propriety and necessity of at once removing the retained portion of the ovum. The only question is as to the best method of accomplishing this." Upon this last point our opinion has been expressed. The hook of Dr. Dewees should only be used when the placenta is wholly detached, and even then we think a better instrument could be selected. In abortion, when the placenta is wholly detached, we think hæmorrhage is extremely rare; for we have seen hæmorrhage cease on separating the vascular connection between the womb and placenta, even before the latter was expelled. The forceps of Dr. Bond we consider but little better, and, in some hands, might be even more objectionable. The polished and convex surface of Dr. Carey's decidual separator is admirably adapted to glide along the inner surface of the womb, and, with a little management, to separate the placental attachment. We now use it *without delay* for the removal of retained secundines, after abortion, *when any considerable hæmorrhage is present*; and we have seen and can see no possible danger from its judicious use. Instead of making it, in such cases, our *dernier*, we make it our first resort. We have little doubt but that the uterus will invariably contract, on the removal of the secundines *in abortion*, yet from habit we almost invariably give ergot.

Cases of Wounds of the Abdomen. BY REED B. BONTECOU, M.D.
Troy, N. Y.

1. *Gun-shot Wound.* Aug. 16th, 1854. Was called to see a lad, aged about 12 years; found him lying on his back with knees drawn up, and suffering great agony. Examined the abdomen and found a

gun-shot wound about two inches above the umbilicus, a little to the left of the mesian line. The integuments were much burnt and lacerated, the weapon having been discharged while in contact with the person. The ball passed through the body, leaving a small wound between the eleventh and twelfth ribs, about three inches to the left of the spine. From the anterior wound a mass of omentum protruded, with a knuckle of intestine. These were immediately returned, and the wounds closed with adhesive plaster and girth. The boy was still suffering from the shock of the injury, and I gave stimulus in connection with morphine in solution, $\frac{1}{4}$ gr. to the dose, once in thirty minutes. I saw him again in two hours; found him still suffering great pain; prescribed 4 gr. doses of opium every two hours till pain should be subdued and sleep obtained. A considerable venous hemorrhage occurred from both wounds.

17th, 8, A.M. Found the little patient more comfortable, but unable to extend the limbs. Skin moist; tongue coated with a thin, pale fur; pain all over the belly on motion, and tenderness to the touch, but easy when lying quiet. Had passed urine; no movement of the bowels, and no sleep. Ordered the 4 gr. powder of opium continued every three hours, and such fluid nourishment as he desired. 6, P.M. Had slept four hours in the afternoon; seemed comfortable, and was perfectly conscious; contracted pupils. Conversed freely with his mother; complained of uncomfortable tightness of the abdominal bandage. Abdomen was somewhat full and was dull on percussion; external hæmorrhage had nearly ceased. There was doubtless a large clot in the peritoneal cavity. His pulse was about 100; was obliged to keep his limbs flexed, and still complained of pain on motion. Prescribed 5 grs. of opium every four hours; broth for nourishment.

18th, 8, A.M. The boy had slept some during the night and sweat profusely. His mother said he snored and slept heavily. He is perfectly conscious, and presents no very marked evidences of narcotism, except the contracted pupil and itching of the skin. Conversed rationally; has no appetite nor great thirst; pulse 90; skin moist; tongue moist; abdomen tympanitic; urine scanty; had taken three of the powders during the night. There was still some venous oozing from the wounds and dullness over the left half of the belly. Complained of sense of distension of the abdomen. I was fearful some portion of the colon, duodenum or ilium was wounded, and did not order any laxative, but continued the powders as before, 5 grs. every four hours.

18th, P.M. Found patient quite comfortable, being then able to

move and extend his limbs; his pulse had got down to 70 per minute, and he was sweating profusely; not much thirst and no desire for food. The opium was beginning to stupify him. He was disposed to sleep most of the time, but was easily roused, and was rational when awake. Ordered beef tea, and diminished the doses of opium to 4 grains, to be given once in six hours.

19th, A.M. The little fellow was quite as well as on the previous evening, with no marked indications of peritoneal inflammation; no hæmorrhage, except slight venous oozing. His father (the captain of the canal boat on which he was) found it necessary to leave with his boat for Buffalo. I urged his parents to leave him with me at the Troy Hospital, which was at that time under my charge, hoping that he might be saved, as he had gone on thus far surprisingly well. But they would not leave him, and I prepared some opium powders of 4 grains each, with as minute directions as possible respecting the treatment which should be pursued till they reached their destination, or some place where surgical attendance could be obtained. I have never since heard of the patient, and cannot therefore say if recovery took place. He certainly had a chance, and the opium undoubtedly kept at bay peritoneal inflammation.

2. *Incised Wound.* Oct. 23d, 1854. A colored boy, eighteen years old, was brought to my office from the steamboat at night. He was in great distress, vomiting incessantly. Considerable hæmorrhage was taking place from an incised wound of the abdomen, two inches above and a little to the left of the umbilicus, which was inflicted with a dirk knife a few moments before. Upon examining the wound, which was one inch and a half in length externally, I found the rectus abdominis two-thirds divided, and a large rent through the oblique muscles into the peritoneal cavity. Some omentum and a knuckle of intestine protruded externally, and the violent efforts at vomiting forced out a foot or more before I could control the opening. The parts were returned and the wound closed by suture. There still remained a large hernia, the size of a cocoanut, which I attempted to keep in place by a band of adhesive plaster, eight inches wide, passed entirely round the body. He was then conveyed home, where I shortly afterwards saw him. There was no evidence that any of the viscera were seriously wounded. I feared, however, peritoneal inflammation, and prescribed opium, pulv. grs. 10, every four hours for the succeeding twelve hours.

The morning of the 25th I found him on my visit complaining of general tenderness of the abdomen and inability to extend his limbs,

or cough, or take a long breath. The pulse had risen from 50, which it had been the preceding day to 95; was rather wiry; the wound was not painful. Ordered 8 grs. opium every third hour and hot fomentations, which had the effect of reducing the pulse and diminishing the tenderness, without inducing narcotism.

25th, 9, P.M. My third visit on that day. Pulse 78 and abdominal tenderness much less. Could extend his limbs somewhat; pupils contracted; skin itching; was rational and felt no thirst or nausea. Prescribed 10 grs. opium every five hours.

26th, 8, A.M. Had taken 20 grs. opium since last visit; pain of belly had subsided, except about the wound, which I dressed, removing the sutures and bracing him up well with a girth of adhesive plaster. He was disposed to be drowsy, and I reduced the powders to 5 grains every five or six hours.

9, P.M. During the afternoon had several profuse watery discharges from the bowels. The abdomen was flaccid, and there appeared no trace of inflammation, except at the wound. The diarrhœa continued to annoy him for several days, but was generally relieved by tannin and opium and acet. plumb. and opium in liberal doses. I continued daily attendance till the twelfth day after the accident, during which time nothing extraordinary occurred to interrupt his convalescence. He has ever since been obliged to wear a support about the abdomen, to keep his intestines from protruding largely on the left side.

Diphtheritis: The Epidemic Malignant Sore-Throat prevailing in Albany, N. Y.

[We are indebted to the correspondent who has furnished us with the following discussion upon the severe epidemic now prevailing in Albany, which embraces the remarks of several distinguished physicians of that city, who have witnessed its characteristics. We shall be glad to have a more detailed account of some of the cases.—EDS. MONTHLY.]

The Albany Co. Medical Society had a special meeting on Tuesday, Nov. 16, 1858, to discuss the epidemic now prevailing in Albany, N. Y. There was a large attendance of the city and county physicians, and a number from the neighboring cities and villages, among whom were Drs. Bontecou and Brinsmade, of Troy—the latter, the accomplished President of the State Medical Society. The President, Dr. S. D. Willard, was in the chair. The discussion was opened by Dr.

Vanderpool, of Albany, who gave a clear and succinct account of the prevailing epidemic, as seen in his practice. His description of the disease accorded in every particular with Wood's "Pseudo-Membranous Inflammation of the Fauces Diphtheritis"—*Practice*, 3rd Ed., Vol. I., pp. 521 *et seqr.* His practice was simple: an emetic to cleanse the stomach and fauces of vitiated secretions, gargles of dilute vinegar, and the mineral acids and tonics very early in the disease to counteract the tendency to the typhoid condition. He had met with but few fatal cases, and in every instance the disease had implicated the larynx, trachea, and bronchiæ, and the patients had died as in true croup. He had benefited and doubtless saved many by removing the vitiated secretions from the fauces and nares with sponges, a feather or a camel's hair pencil, and the early and persistent use of tonics, stimulants, and nutrients.

Prof. Townsend followed with a translation and rescript from the latest French Journals on Diphtherite. The paper was elaborate, and contained much valuable information, especially in reference to the use of the chlorates of potassa and sodium as gargles, and the use of a silver tube, bent, and introduced into the larynx through the glottis. After the reading of the paper the discussion became general. Dr. Delamater had had 40 cases, 4 fatal, with 4 *post-mortems*. The larynx, trachea and bronchiæ were found lined with a diphtheritic exudation, readily separated from the mucous membrane, which was found entire except upon the tonsils, which were excavated, enlarged and much congested. The secretions were copious, offensive, and very acrid. In one fatal case gangrene of the uvula had taken place. Dr. Freeman mentioned a case where the entire epiglottis was coughed up a few hours before the patient, a young man, died of gangrene of the entire pharynx. Dr. Harris mentioned one case in which the entire palate and a portion of the arch on one side was removed with the forceps. The patient, a young man, died a few hours after in a typhoid condition. Dr. James McNaughton, the Nestor of the profession in Albany, narrated the particulars of a large number of cases which he had seen in consultation, where gangrene of the tonsils, uvula, palatine arches, pharynx and glottis had taken place. He raised the question of its relation to scarlatina, and inquired if any cases of the latter disease had been observed in the city. But few cases had been treated during the last four months. Cases were reported of the epidemic sore-throat occurring in patients who had had scarlatina a few months previous.

Dr. McN. had noticed an amelioration of the disease during the

past few weeks, and also spoke of the fact that adults were now the subjects of the disease which had previously confined its ravages to children. Males were more subject to attacks than females. No mention was made of a second attack in the same patient. The disease is less malignant than at first, but is still serious, as the mildest cases are liable to lapse into a malignant and typhoid state.

Dr. Brinsmade, of Troy, is endeavoring to procure an account of the disease, accompanied by statistics, *post-mortem* appearances, &c., and will doubtless receive the hearty co-operation of the profession of Albany.

The discussion was animated and very able, placing the experience of the various participants within the reach of every member of the Society.

R.

Report on the Formation of Glucogenic Matter in the Animal Economy, made to the Academy of Medicine. BY M. POGGIALE.

At the meeting of March 23, 1857, M. Cl. Bernard read a memoir before the Academy of Sciences, on the physiological mechanism of the formation of sugar in the liver. The object of this communication was to announce the existence of a peculiar substance, which he called glucogenic matter, and which was readily converted into sugar, in the presence of ferments, or by the liver in a physiological condition.

In accordance with the experiments related in this memoir, Bernard states, "that the livers of dogs, fed exclusively on meat, possess the special property of forming a glucogenic substance analogous to vegetable starch, and alike susceptible of an ultimate transformation into sugar by passing through the intermediate condition of dextrin." In the herbivora, the glucogenic matter is also produced in the liver, but the physiologist does not doubt but that it is formed there not at the expense of the amylaceous materials. In the liver there should consequently be, with these animals, a permanent source of glucogenic matter, while in the amylaceous food there would be an intermitting source.

The discovery of this substance constitutes, undoubtedly, one of the most important facts in animal physiology; and it was received with the most intense interest by the scientific world. Bernard's conclusions were not, however, accepted by every one. On May 25, 1857, M. Sanson, of Toulouse, sent a paper to the Academy, entitled *Memoir on the Physiological Formation of Sugar in the Animal Economy*,

in which he endeavored to prove that there exists in the blood of the abdominal circulation, as well as in the tissues of the principal organs, a substance analogous to dextrin, and susceptible of conversion into glucose under the influence of diastase. Dextrin in the blood would have its origin with the herbivora, in the action of the saliva on the amylaceous principles of the food, and with the carnivora in the food employed by them for nutriment, where it would be met already formed. In fine, the liver, in no case, would secrete either sugar or glucogenic matter.

The experiments which formed the subject of this memoir, had been made on the larger herbivora, thus differing in this from those of M. Cl. Bernard, which had been made on dogs fed with meat. In the course of the year 1857, Sanson addressed different notes to the Academy of Sciences and the Academy of Medicine, in which he related some new experiments, corroborative of the conclusions set forth in his first memoir.

The Academy charged MM. Longet, Bouley and Poggiale with the examination of these communications, and the preparation of a report on the experiments relating to the formation of glucogenic material.

The formation of glucogenic matter and of sugar in the animal economy is certainly one of the most interesting and curious questions in physiology; so that, for nearly a year, we have spared no labor to arrive at a definite conclusion. The resources of the schools at Alfort and Val-de-Grace, have been placed at our disposal; numerous experiments have been made on the carnivora and on the larger herbivora in different conditions, and, without pretending to determine definitely the laws of animal glucogenesis, we hope to set forth certain causes of error due to the proceedings employed, and to give to glucogenesis a simplicity which late experiments had removed from it. We shall expose all the facts we have observed, and we hope that the Academy will approve the conclusions that we have the honor to present.

What process should be employed for the removal of glucogenic matter? What is the nature of that substance? Can it be found in the carnivora, in any other organs besides the liver? Whence comes the glucogenic matter which is existing always in the liver? Is it formed exclusively by the liver, or is its source in the amylaceous substances of the food? Does it exist in all the organs of the herbivora, and what is the influence of the food on its production? These are the important questions that we have endeavored to solve in this work.

What is the best process for the extraction of the glucogenic substance? In his first memoir, M. Cl. Bernard gave the following process for the extraction of the glucogenic matter: The liver is cut into very thin slices, that are immediately placed in boiling water, in order that the glucogenic substance may not be converted into sugar on account of the presence of its ferment. The portions of the liver thus coagulated are rubbed in a mortar, and are then boiled for about an hour in a quantity of water just sufficient to cover them. This is then expressed, and the liquid passed through a filter, appearing of an opaline hue. This liquid is immediately mixed with four or five times its volume of absolute alcohol, when there is formed an abundant flocculent precipitate of a blueish-yellow color, which should be received on a filter and washed several times with alcohol. In this way there is obtained the impure glucogenic substance mixed with azotized matter. Its aqueous solution is colored by iodine, is not reduced by the cupro-potassa test, and does not ferment with yeast. In order to remove the foreign substances it retains, it is boiled in a very *concentrated* solution of caustic potassa for half an hour; a little water is then added, and it is filtered. The solution is precipitated a second time by the addition of four or five times its volume of alcohol. The precipitate being received on a filter, is submitted to repeated washings with alcohol, in order to remove the potassa. The substance thus prepared contains still some carbonate of potassa, which is insoluble in alcohol; and hence it is indispensable that it should be dissolved in water, that the carbonate of potassa should be saturated with acetic acid, and that precipitation be produced a third time by alcohol. The acetate of potassa will remain dissolved in the liquid, while the glucogenic matter, separated by filtration, will be perfectly pure.

Such is the proceeding first employed by Bernard; we have given it because it has been the cause of certain errors. In fact, when boiling caustic potassa is made to react on albuminous substances, it produces a small quantity of a substance which is transformed into sugar in the presence of sulphuric acid, and which, after this conversion, ferments and reduces the solution of tartrate of copper in potassa. The purification of the glucogenic substances, requiring the employment of caustic potassa in the first process of Bernard, enables us to understand the difference in the results obtained by this physiologist and those published by M. Sanson, and to which we wish, in a subsequent portion of this article, to call the attention of the Academy.

It is important to add, however, that in using the reaction of caustic potassa on albuminoid matter, there is formed but a small quantity

of glucogenic matter, and sometimes none at all. At a boiling heat the caustic alkali destroys the greater part, and sometimes the whole of the product formed. To obtain a larger quantity of sugar, it is necessary to carry on the process, protected from the atmosphere, and to determine with care the quantity of potassa employed and the duration of the experiment. This will be a most interesting subject of study.

Bernard, wishing to avoid the use of energetic agents, has proposed a very simple method of separating the glucogenic substance. It consists in pouring a large excess of crystallizable acetic acid into a very concentrated and filtered decoction of the organ (whether liver or muscles) that is to be examined. Speedily there is separated a whitish precipitate, which consists of glucogenic matter, the albuminoid substances being soluble in acetic acid. When the organs do not contain any glucogenic matter, acetic acid will produce no appreciable precipitate. We have, however, sometimes obtained, with decoctions of animal substances, a whitish deposit which did not contain a trace of glucogenic matter. The white substance, which is deposited in the crystallizable acetic acid, possesses all the characteristics of glucogenic material; thus, mixed with the saliva, it is immediately transformed into sugar, and the transparent liquid obtained possesses the property of fermentation, and will *reduce* solutions of copper. In this process, as in the preceding, it is indispensable to obtain the products of fermentation in order to determine the presence of the glucogenic matter. This proceeding presents undoubted advantages; it enables one to recognize easily, and in a few minutes, if the different tissues of the organism contain this substance. Acetic acid does not destroy albumenoid substances, and does not render the observer liable to create the substance which he is seeking. We have followed this process in our decisive experiments.

What is the nature of glucogenic matter? The composition and characteristics of glucogenic matter justifies its being placed in the group of ternary substances, such as cellulose, starch and dextrin. Indeed, being analyzed by M. Eugene Pelouze, it gave the following result:

Carbon,	39 8.
Hydrogen,	6 1.
Oxygen,	54 1.

100 0.

Corresponding to the formula, $C_{12}H_{12}O_{12}$

It is neutral, white, pulverulent, inodorous, insipid, soluble in water, but insoluble in alcohol or acetic acid. Aqueous solution of iodine, mixed with its solution, produces a violet color, or a redish chestnut. The liquid is decolorized at a temperature of about 80° C, but resumes its primitive color, like iodide of starch, when it is allowed to cool. This substance does not reduce the cupro-potassa solution, and does not ferment under the influence of yeast; but if it is boiled along with mineral acids diluted with water, or if it is placed in contact with diastase and saliva, it is converted into sugar, and then acquires the property of fermenting and reducing the salts of copper. The opaline solution having become transparent, it is then no longer capable of being colored by iodine, or precipitated by crystallizable acetic acid. It is converted into xyloidine by the action of fuming nitric acid. Like xyloidine obtained from starch, it is combustible, and detonates with flame when it is heated at a temperature of 180° C.

Is this substance starch or dextrin? The *ensemble* of its properties place it between the two. Besides, whether it be starch or dextrin is a question that seems to us offers little interest in a physiological view. It is especially important to know if this substance is transformed into sugar under the influence of acids or ferments, and upon this point science is firmly fixed.

Does glucogenic matter exist in other organs, besides the liver in the carnivora? We know that the food of man and animals is composed of organic substances, both azotized and non-azotized, of fatty matters and mineral substances. Observation and investigations made during twenty-five years by chemists and physicians demonstrate that nitrogenous food preserves the organs, produces force, and serves for the development of animals; that fatty, saccharine and amylaceous substances constitute, on the other hand, respiratory elements whose carbon and hydrogen, uniting with the oxygen of the air, maintain animal heat. This theory, however, which is true in its generality, and which has rendered distinguished service to physiology, is not rigorously correct. If amylaceous food is readily converted into sugar, it is also certain that nitrogenized food can, in the carnivora, furnish in their turn this principle. The experiments of M. Cl. Bernard, and those which one of us made three years since, on the milk of three bitches, exposed exclusively to a meat diet for 21 days, enable us to affirm that sugar can be formed at the expense of nitrogenous substance. The organism, in default of amylaceous or saccharine substances, decomposes albuminoid principles, and converts them probably into glucogenic matter, into urea, and other products which are combustible.

Chemists have obtained in the last few years a somewhat large number of *dedoublements*, which enable us to understand the conversion of nitrogenous food into ternary substances. Animals, like vegetables, thus can, under certain circumstances, create immediate principles, and their rôle does not only consist in destroying those which are furnished them by vegetables.

From these considerations, it follows that glucogenic matter, and from necessity sugar also, both in man and animals, are furnished by the food, or are formed in the organs. In order to determine, then, if the formation of this substance takes place alone in the liver, or in all the organs, it is necessary to experiment first with the carnivora, where this substance does not occur in the food. To do this we have fed dogs exclusively on meat, and have then sought for the glucogenic substance in the tissue of the liver and in that of the other organs of the economy.

First Experiment.—A young and active dog was fed for twelve days on boiled meat; then, after some hours of abstinence from food, he received a copious repast of boiled meat. He was then killed during full digestion, and the glucogenic substance was sought after in the liver and the muscles in accordance with the second process of Bernard.

1st. The liver was washed by passing a current of cold water through the vena porta, then cut into small pieces, and a very concentrated decoction made of it. The result was a whitish liquid containing no sugar.

2nd. Equal quantities of this liquid were introduced into two tubes of glass. Into one of them the cupro-potassa solution was poured, it was then heated, but there was no reduction. To the other saliva was added, and slight heat employed; soon the turbid liquid became clear, and reduced the copper salt. It is important to remark here that the proof of the presence of sugar cannot be furnished except by the alcoholic fermentation, and that the reduction of the cupro-potassa liquid should only be considered as a presumptive sign.

The phenomena of reduction and coloration produced by organic substances are often deceptive, and because this important fact has not been recollected, grave errors have been committed in late investigations. When the liquid to be tested contains substances which behave as glucose—such as lactine, dextrin, uric acid, and a great number of other organic substances—then the investigation for sugar by the salts of copper becomes impossible. It should not be forgotten when we employ the tartrate of copper and potassa, that albuminoid substances precipitate the oxide of copper and consequently decolor-

ize the liquid; and that all the reduction agents, such as sulphurous acid, arsenious acid, the sulphites, hyposulphites, aldehyde, chloroform, &c., can reduce it. M. Barreswil has declared recently, that the reagent proposed by him for the recognition and determination of sugar has no absolute value. It is, he says, a reagent, like the greater part of those we employ in our laboratories, which, in certain determined cases, suffice to characterize a substance, and which, in others, are only important signs needing confirmation.

3d. Ten grammes of the decoction of the liver being placed in a tube, yeast was added to it and the temperature was slightly elevated, and soon the escape of carbonic acid became manifest. Ten grammes of decoction without the previous addition of saliva, being treated in the same way, no fermentation was observed.

4th. Aqueous solution of iodide communicated a violet brown color to the decoction. At 75° C, the liquid was decolorized, and by a reduction of the temperature, it regained, like iodide of starch, its primitive color. The decoction treated first by saliva or by dilute sulphuric acid was not colored by the aqueous solution of iodide.

5th. A large excess of crystallizable acetic acid was poured into the decoction of the liver, and a whitish deposit was obtained, presenting all the characteristics of glucogenic matter. A portion of this same decoction being mixed with saliva, then, on the addition of acetic acid, no precipitate was produced. The glucogenic substance was, in fact, converted into glucose.

6th. Muscle, lungs and spleen of the dog being subjected to the same operations, in none of them could the presence of glucogenic matter be detected. There was no fermentation, no reduction, no colorization by iodide water, no sensible precipitate by crystallizable acetic acid.

Second Experiment.—Another dog being fed exclusively on meat for eight days and then killed, an examination was made of the liver, blood and muscles, according to the process first recommended by Bernard. The impure glucogenic matter in the liver being well washed, was colored by iodide water. After the action of saliva and sulphuric acid, it reduced the cupro-potassa solution and fermented with yeast. No like effect was observed in operating on the blood and muscles.

These experiments, and others which we need not report here, show that in experimenting on dogs fed on meat the results are very distinct, and that the glucogenic substance is *only* met with in the liver. M. Sanson, however, in his third memoir on the physiological formation of sugar in the animal economy, affirms that he has found in the

blood of a dog supported on meat, a substance absolutely identical with the hepatic glucogenic substance in its physical and chemical properties; that is to say, capable of transformation into fermentable sugar. While using the reaction of caustic potassa on albuminoid substances, nothing remarkable was obtained; but on the contrary, his result agrees with that we have announced in this respect. According to this observer, the flesh of the herbivora contains the elements necessary for the formation of the sugar, which is spontaneously produced in the structure of the tissues by a direct chemical action. One of us has already shown, in a work published in 1855, that the meat does not furnish the sugar found in the blood. This fact is now admitted by every one. We have since sought for the glucogenic substance in butcher's meat, and declare, that in twenty experiments we have only found it once.

It follows, from our experiments, that the glucogenic substance which we meet in such large quantities in the liver, is not furnished in the food to the carnivora. In the present condition of the science nothing more can be proven.

Does the glucogenic substance exist in all the organs of the herbivora, and what is the influence of food on its production? When we experiment on animals nourished exclusively on meat, observation has shown that the glucogenic substance only exists in the liver, and the results of these experiments do not admit of a doubt. It is not the same with herbivorous animals who take a greater or less quantity of saccharine and amylaceous articles of food, which makes the problem more difficult to determine. In the first memoir addressed to you, M. Sanson declares that the experiments which formed the subject of that work had been performed on the larger herbivora. If in that, he says, they differ from those of Bernard, who made his on dogs fed with meat, it cannot alter their significance. In an early experiment, Sanson found in the tissue of the spleen, the lungs and the kidneys, treated according to the first process of Bernard, a substance absolutely similar to that obtained from the liver. It was soluble in water, was colored by iodide water, was transformed into sugar, did not exercise any action on the cupro-potassa solution, and fermented by the action of either diastase or yeast. The results of this experiment allowed of the supposition that the glucogenic substance was carried into these organs by the blood. Hence it was important that this liquid be examined. For this purpose, M. Sanson used bleeding at the jugular vein of a horse; the blood discharged was immediately coagulated in boiling water, and then treated by the usual process. This new experiment

also furnished the glucogenic substance. The same result was obtained with arterial blood and with that of the vena porta. It is then almost certain, says Sanson, that all the tissues in the body should contain this substance, since the blood contains it. But to throw still more light on this question, this observer has submitted to the tests before mentioned the muscular tissue of the dog, and has obtained a white curdy substance presenting all the properties of glucogenic matter. Thus, muscular tissue contains, like that of the other organs, a substance which is convertible into glucose by acids and diastase. It is then permitted us to conclude, adds Sanson, that in the experiments made on animals nourished with meat, there has been furnished these animals an aliment containing a substance capable of conversion into sugar.

We have repeated the experiments of Sanson, and readily recognized that the glucogenic substance is sometimes encountered in all the organs of the herbivora, and markedly so in those of the horse. We have ascertained that, under certain circumstances, the food may carry into the animal economy modified amylaceous matters which can then be readily detected in the blood and muscles. On this point we agree with M. Sanson; but we cannot admit, with him, that the glucogenic substance is *always* furnished by the food. Before narrating the experiments upon which our opinion rests, it is important to remark that we have precipitated the glucogenic substance by crystallizable acetic acid, while M. Sanson will recollect that he employed caustic potassa. This is an important fact, which must not be lost sight of in this discussion. But, over and above this cause of error, we have recognized that the glucogenic substance can pass through all the organs when alimentation is rich in amylaceous substances.

A rabbit was fed on carrots and luzerne—being killed at the end of 15 days, a considerable quantity of the glucogenic substance was detected in the liver, whilst it was impossible to recognize the least trace in the other organs. This experiment, which we have repeated several times, establishes clearly the fact that in rabbits, fed on food poor in starch, the glucogenic substance can only be detected in the liver. But if the carrots be replaced by grain—by oats, for example—at the end of some days the presence of the glucogenic substance can be detected in the blood and the tissues in very variable quantities, although less than in the liver. In two experiments made on rabbits fed on oats, we were able only to recognize traces of glucogène. We have also determined the presence of glucogène in horses fed on oats, at Alfort, not

only in the liver, but also in the other organs. It would be interesting to examine, if, under the influence of an alimentation poorer in starch, glucogène could in like manner be detected in all the organs of the horse. On the other hand, however, we have recognized that in horses, subjected for some days to complete abstinence, the glucogène diminishes considerably in the muscles, although it still exists in notable quantity in the liver.

In a late series of experiments, we have sought for glucogène in the flesh of the beef, the horse and rabbit fed in the ordinary way, and we have never met it in the rabbit. We have only found it once in butcher's meat, although it seems to exist always in the muscles of healthy horses. These differences belong probably to the kind of food, and do not prove that the formation of glucogène is accomplished in all the tissues: Whatever might be the food, and whatever the animals upon which we operated, we met constantly a large quantity of this substance in the liver, whilst its presence in other points of the organism is accidental, and is only due to certain physiological conditions that we can generally modify.

Experiments made by M. Sanson in the presence of the Commission.—The experiments just given were finished when M. Sanson, who has been in Paris for a short time, expressed a desire to repeat some of his experiments in the presence of the commission. We accepted with pleasure this proposition. Four experiments were performed by this chemist in the laboratory of Val-de-Grâce, and the following are the facts which the commission has carefully collected:

First Experiment.—Twelve hours after the slaughter, 1 kilogramme of beef was taken and divided into very thin slices, which were quickly thrown into boiling water in order to convert the glucogène into sugar. The pieces of coagulated meat were then boiled with a small quantity of water, expressed, and the liquid obtained was filtered. This liquid was divided into three portions, and exposed to the following tests: 1st. One portion of the decoction was mixed with an excess of crystallizable acetic acid, without the formation of an appreciable precipitate. 2nd. In a tube of glass, another portion was poured along with some saliva; it was then slightly heated for seven or eight minutes, and yeast was added. A similar experiment was made without the addition of saliva, and there was obtained in both cases some small bubbles of gas. But, in a comparative experiment with distilled water and yeast, the same quantity of gas was produced, showing that in the two previous experiments the gas was furnished by traces of sugar, or of starch contained in the yeast employed.

Second Experiment.—We operated as before, on all the muscles of a rabbit, fed on carrots and luzerne, and the results were exactly the same.

Third Experiment.—A concentrated decoction was made of 750 grammes of mutton, two hours after slaughter. The liquid filtered was successively mixed with saliva and yeast, suitably washed, without any fermentation. A portion of this liquid was treated with crystallizable acetic acid, and there was formed a white deposit which contained no glucogène. In fact, it was not transformed into sugar by the saliva, and it did not ferment under the action of the yeast. Being placed in a tube with distilled water and yeast, there was no disengagement of gas; although in another tube, under similar circumstances, a little glucose being added, at the end of a few minutes the yeast produced a very active fermentation.

Fourth Experiment.—The tests employed in the third experiment were repeated on the muscular tissue of a rabbit without any different results. It follows, hence, from the experiments made by M. Sanson, himself, that beef and mutton, and the flesh of the rabbit, do not contain, normally, glucogène.

Conclusions.—The experiments that we have summarily set forth in this report justify us in presenting the following conclusions to the Academy:

1st. The separation of glucogène by the aid of crystallizable acetic acid is preferable to the process originally employed.

2d. A concentrated decoction of liver, muscle, &c., mixed with saliva, and slightly treated, will ferment in the presence of yeast if it contains glucogène. It is necessary previously, to ascertain that it contains no sugar.

3d. The properties of glucogène seem to place it between starch and dextrin.

4th. When experiments are made on dogs fed exclusively on meat, glucogène is only met with in the liver. In the actual state of the science, and without pronouncing an opinion on the theoretical question, we are obliged, then, to admit, that in the carnivora this substance is produced *in* the liver, and that it is *not* formed in the tissues of the body.

5th. Glucogenic matter is abundantly met with in the livers of the herbivora. It can only be found in the other organs of the economy when such animals are fed with food rich in amylaceous substances.

6th. In a great number of experiments we have only once detected the presence of glucogène in butcher's meat. In other experiments

we have constantly found it in the muscles of healthy dogs; but this interesting fact, which is due to the researches of M. Sanson, does not prove that glucogène is only furnished by the food.

7th. In conclusion, your Commission has the honor to propose that your thanks be given to M. Sanson, and that his memoirs be deposited in the archives of the Academy.

L. H. S.

Crotonol. Translated from "Le Moniteur des Hopitaux."

Crotonol is the vesicating principle of croton oil, being a colorless, terebinthinate substance of a peculiar odor. Croton oil contains four per cent. It resinifies in contact with caustic potassa and soda, and loses the irritant action which it possesses on the skin. Submitted to ebullition along with water or dilute sulphuric acid, it is converted into an oil with the odor of humus, which is volatilized by the aid of steam. The oil is insoluble in water. Immediately after distillation it is colorless, although it slowly becomes brown and then black. If crotonol is so little permanent that it can be decomposed by boiling water, it cannot be the same as croton oil, which even prolonged ebullition will not deprive of its acidness. Hence we must conclude that if croton oil contains crotonol, the latter is not present as a simple mixture.

Schlippe finds it impossible to assign a rational formula for crotonol, and represents it by the formula $C_{13}H_{14}O_4$, and says that it presents analogies with the cardol which Stædeler has obtained from the balsam of *Anacardium*.

When croton oil is agitated with an alcoholic solution of soda, the acrid principle is entirely removed and is concentrated in the alcoholic solution. In order to isolate it, the oil which swims on the solution must first be removed; this is then treated with a dilute solution of chlorhydric acid, which causes the separation of an oleaginous substance that must be dissolved in alcohol, and then agitated along with hydrate of lead. A flocculent precipitate then takes place, which changes by degrees into a viscous mass. When all acid reaction has ceased, this is treated with a weak solution of soda; the liquid becomes turbid and then clears up, depositing a limpid oil. Large quantities of chloride of calcium must now be quickly added. The oil is then washed with a copious supply of water on a moistened filter; an ethereal solution is made, which is agitated with water, then decanted and caused to evaporate in a vacuum. The product constitutes *crotonol*, or the vesicating principle of croton oil.

L. H. S.

Sources of Error in the Determination of Sugar in the Urine.

It has been shown by Leconte, Bonnet and Berlin, that the potassa-copper liquid, employed in the investigation of the presence of glucose, may undergo, on the part of uric acid, a reduction analogous to that effected by the glucose itself. Babo and Meissner have lately shown that, in such reduction, allantoine is formed, a part of which is converted into urea and oxalic acid.

The coloring matter of the urine is without action on the reagent in question, as is the case with creatine, creatinine and hippuric acid. It is certain, however, that a reduction may be effected by the volatile organic acids.

A constant cause of the reduction has just been discovered by Brucke, which is glucose itself, this substance being always present in normal urine. The author insists on this opinion, since it is not based upon the nature of the products of decomposition, but upon the production of a direct compound of the sugar with potassa—a compound already employed by Lehmann in his examination of sugar in the blood. The process for demonstrating the presence of sugar in normal urine demands great care, and is as follows: Absolute alcohol should be added to the urine so that it may constitute four-fifths of the whole volume. The author of this process ordinarily operates with 200 centilitres, although, with care, 50 centilitres would answer. By the addition of the alcohol the mixture becomes turbid, and a precipitate is produced that can be separated by means of a filter. To the clear liquid an alcoholic solution of potassa is then added, constant stirring being used, until red litmus paper is distinctly blued by the mixture; after which it is allowed to rest for twenty-four hours in a cool place. At the end of this time the liquid is decanted with care, and the glass is reversed on *papier buvard*; when the latter becomes dry, the glass is placed mouth upwards, and suffered to remain until no more alcoholic odor is exhaled; then it will be found that the bottom of the vessel and a portion of the sides will be covered with a crystalline layer, which represents the saccharate of potassa in question. The deposit is rich when it gives the glass a frosted appearance; on the contrary, a clotty or granulated crystallization indicates the presence of foreign matters.

Saccharate of potassa is very soluble in water and with such a solution it is easy to perform the different experiments necessary for the determination of glucose—experiments too well known to require their mention here.—*Jour. de Pharm. et de Chémie.*

L. H. S.

Modern Investigations on Fluorine

Professor J. Nicklès, of Nancy, has been studying the subject of Fluorine and its presence in inorganic and organic matter, and the results of his labors have been presented to the chemist and physician in the columns of the *Journal de Chimie Médicale*. The following are the conclusions set forth in his interesting paper:

Fluorine exists in the blood in very small quantities; also in the urine and the bones, although in less quantities in the latter than has generally been asserted. Berzelius asserted that fluoride of calcium formed three per cent. of calcareous matter; but Nicklès has ascertained that there is hardly 0.05 grm. of the fluoride in a killogramme.

The sources whence the animal organism obtains its fluorine are as follows: The various potable waters and vegetable substances, although some of these contain fluorine in such small proportion that it is necessary to operate with, at least, *one* killogramme of ashes, and with the product of the evaporation of some thousand litres of water. The organism can also, by accident, derive fluorine from mineral waters, all of which contain a very large proportion of fluoride as compared with ordinary potable waters. This circumstance may explain the efficaciousness of certain mineral waters which are only slightly mineral in their character, such as the waters of Plombières, Mont-d'Or, Sultzbad, &c.

The water of the Seine, taken at Paris, is one of those containing the smallest amount of fluorides. That of the Somme, taken at Amiens, is, of all the rivers of France, richest in fluorides. All mineral waters are not equally rich in fluorides; the richest of those examined by Nicklès being the water of Contrexéville, Antogast, Rippoldsau, Geilnau and Châtenois (on the lower Rhine). A litre of these waters is sufficient to give unequivocal indications of the presence of fluorine.

The water of the Atlantic Ocean does not contain a sensible proportion in 300 litres. This fact establishes a very marked difference between it and those mineral waters which are analogous to it.

The law of the diffusion of fluorine on the surface of the earth can be thus formularized: *There is some fluoride of calcium in all waters that contain bi-carbonate of lime, and hence fluorine may be present in all rocks and minerals that are of sedimentary origin.*

The usual method of seeking for fluorine is defective in two essential points, and leads to the supposition of the existence of fluorine where it does not exist. These are—the action that sulphuric acid alone

can have on glass; and the fact that *it* may contain small quantities of fluohydric acid.

In the course of Nicklès' experiments, these sources of error were eliminated by replacing the slip of glass usually employed, by a slip of rock crystal, and by employing an acid free from fluohydric acid.

The sulphuric acid to be preferred, in such experiments, is that which has been purified by dilution with water, and after exposure for some time to a temperature of 150° C. to 180° C. The solvent employed is fluohydric acid, which can be obtained, with some little care, free from fluorine.

Many substances have heretofore been considered as fluoriferous, without containing fluorine—the latter being introduced by the reagents employed, especially by the sulphuric acid. L. H. S.

Hospital Reports.—*Bellevue Hospital, Lying-in Wards.* Service of Dr. BARKER. Reported by FOSTER SWIFT, M.D., House Physician.

Ann Rowland, aged 25, and married, was delivered of a healthy female child on the 16th of October, after a somewhat tedious labor. On the second day after delivery, pulse 112; cheeks flushed; lochia inclined to be offensive; bowels loose, and stools very fœtid. She had a vaginal injection of Labarracque's solution, ʒj. to aquæ Oj. and Tinct. verat. viride, 5 gtt., every three hours, was given so as to depress the pulse to 80, and to render the skin cool and moist; and solution of morphine enough to calm irritation and secure some sleep.

Oct. 21st.—Tinct. ver. vir. kept the pulse between 60 and 80; lochia still offensive; bowels still loose; belly tympanitic and inclined to be tender; she was ordered pills of solid opium and camphor, ää. gr. j., every two hours, and poultices to the abdomen. Vaginal injection continued.

Oct. 22d.—About in the same condition; pulse inclined to run up if verat. virid. is omitted, and tongue somewhat dry. She was kept upon the same treatment, with the addition of one-half oz. of Port wine every two hours.

Oct. 25th.—Lochia less offensive; tenderness much less. Tinct. verat. virid. given in two-drop doses every two hours, which was entirely discontinued on the 27th, and the patient put upon pills containing quiniæ sulph. gr. j., pulv. opii gr. ss., substituted for the camphor and opium pills. She continued improving till the 29th, when she had a severe chill; her pulse ran up to 120, and her tongue became

dry. Her right breast had become very much tumefied and very tender. It was attempted to discuss it by the use of emollient applications and friction. On the morning of the 31st, pus was discharged from the nipple. Cataplasms were immediately applied to favor suppuration, and she was put upon a supporting plan of treatment. Quinine and opium, and one oz. of whiskey every two hours. On 4th of November the abscess was opened, and about eight ounces of pus evacuated. Since that time she has been doing well.

Ellen Haydon was delivered with the forceps, after a tedious labor, of a male child, the head being engaged in the outlet five hours. She is unmarried. On the 11th of October, the day after her confinement, she was found with a tender belly, very tympanitic, and complained of having had a chill during the night. She had a frequent, strong pulse, over 100, and was very restless. She was given morphine enough to quiet her nervousness, and tinct. verat. virid. gtts. 5, every two or three hours, as the occasion indicated; after the third dose she became slightly nauseated, and her pulse fell to 76, the skin becoming cool and moist. Poultices were applied over the abdomen. She was kept gently under the influence of veratrum for three days, and then it was gradually withdrawn. She continued to improve, and on the 20th October was transferred to the convalescent ward.

Jane White, delivered of a boy, October 8th, after a moderately easy labor; twelve hours after delivery she was taken with a sharp chill, followed by marked tenderness over the abdomen, and some tympanitis. She was put upon the moderate use of tincture of veratrum viride and morphiæ sulph., to secure quiet and to depress the pulse, which had risen to over 100. The next day, twenty-four hours after she was put upon treatment, much improvement had taken place; her skin had become moist, her pulse had fallen to about 80, although there was a tendency in it to run up if the veratrum was omitted. That medicine was continued as the occasion indicated, for three days, from which time she constantly gained ground, although still weak, which, together with the mental depressions incident to her condition, (for she was unmarried,) retarded her recovery.

REVIEWS AND BIBLIOGRAPHY.

Illustrations of Typhus Fever in Great Britain; the Result of Personal Observations made in the summer of 1853, with some remarks as to its Origin, Habits, Symptoms and Pathology. BY J. B. UPHAM, M.D., &c. Pamphlet, pp. 46. Reprint from the Boston Med. Journal.

About ten years ago, Dr. Upham published the results of his clinical observation and study of typhus in this country as imported by the large number of emigrants that were poured upon our shores from the year 1845 to '48. Making a pleasure trip to Europe in 1853, he took a portion of his time from pleasure and devoted it to the study of the same disease in its native haunts, carefully noting the results of his observations. Still it is doubtful if we should have had them laid before the profession, if typhus fever had not again made its appearance in Boston and at the Massachusetts General Hospital in that city, which is, by-the-by, the most elegant institution of that character in this country. The *brochure* is a valuable one, and because it may not be within reach of all our readers, we make two extracts from it. The first is an excellent summing up of what is known of typhus.

"It is an affection sudden and severe in its accession, originating mostly in the densely populated and poverty-stricken portions of the larger cities and towns of England, Scotland and Ireland, traceable, in a majority of cases, on the part of the patient, to a more or less immediate intercourse with the sick; common to all ages and both sexes; ushered in by lassitude, depression, rigors, anorexia, headache, pains in the back, limbs and joints; accompanied, or soon followed, by loss of strength; dullness of the intellect and special senses; perversion of memory; stupor; hot and pungent skin, dusky, moist or dry; flushed face; suffused eyes; furred and loaded tongue; accelerated, but moderately full, soft, compressible pulse; without any considerable deviation (in its simple uncomplicated form) from a normal condition of the chest and abdomen; general sensitiveness of surface; a strong, peculiar nauseous odor of the body; exhibiting, on or about the fifth day, an abundant, characteristic rash, first seen upon the arms, upper part of chest and legs, later on abdomen and back, never on the face—the approach of which is previously heralded by an indistinct mottled and roseate appearance of the surface, seemingly subcuticular—which rash is at first light, pinkish, florid, isolated or clustered, simulating not infrequently the eruption of measles—then darker, more or less persistent, spreading, increasing in abundance and intensity for several days, sometimes livid, petechial, fading on or about the tenth day, and disappearing, in the order in which it came, from about the twelfth to the sixteenth day: which symptoms may vary in severity and relative importance, may vacillate from better to

worse, from worse to better, or remain stationary, or diminish in intensity till they are merged in convalescence; or may be aggravated and receive accessions—the tongue become dry, swollen, fissured, black, with accumulations of sordes on the teeth and lips; injected eyes; fuliginous face; burning skin; livid and petechial spots; hurried, interrupted, imperfect respiration, accompanied by sighs and moans; dullness at lower posterior part of chest on percussion; an exceedingly rapid, feeble pulse; extreme muscular prostration, but with momentary exhibitions of unnatural strength; coma vigil or great nervous agitation, simulating at times the busy excitement of delirium tremens; with sometimes coolness of surface and profuse sweating; terminating, at a variable period between the tenth and twentieth day, often earlier, rarely later, in death; the *post-mortem* examination disclosing, externally, much discoloration of depending and posterior parts—internally, the absence rather of any considerable organic lesion, but commonly evincing more or less abnormal vascularity of the brain and its membranes, its substance being firm and natural; the bloody points on its cut surface numerous, distinct and dark—with oftentimes slight increase of serum beneath the arachnoid and in the ventricles, clear or turbid; lungs externally normal—internally normal anteriorly, the posterior and depending parts more dense and engorged; lining membrane of the bronchia reddened, stained, not unusually injected; heart soft, flabby—its contained blood dark, fluid, dissolved, sisy—with loose non-coherent clots in the meshes of its valves; viscera of abdomen normal, with the exception of discoloration and sometimes simple congestion of the mucous lining of the small intestines—occasional softening of the spleen, and general fluid, sisy, disorganized condition of the blood throughout the body—the sum and substance of which symptoms, facts and circumstances is represented under the conventional term of *Typhus*."

Our second extract shows where and how this disease is bred.

"In company with the chief of the detective police, I visited one of the most noted of these fever localities in London. A sketch from nature may not be inappropriate in this connection, and will serve to impress the facts above stated. The visit was made at night. A drive of a mile or two from Charing-cross took us into an ill-lighted, irregular-shaped court, in the midst of a densely populated portion of the city. The place was badly paved; the ground was uneven, and the whole region redolent of filth. From this court, as from a centre, crooked and narrow streets straggled out into the darkness. Down one of these we plunged, taking the middle of the way, which was also the gutter. Coming abruptly to what appeared to be the end of a *cul de sac*, we descended some steps and stooped beneath the archway of a portal. This was the entrance to one of the poorest of the cheap lodging houses of London—the temporary shelter of the most wretched and destitute wanderer, where, for a penny ha'penny a head, a bed and a roof is furnished for the night. The detective knocked authoritively at a side door, which, in a few moments, was unbolted and thrown open. A most villainous stench was our greeting. The

floor of this room was several feet lower than the level of the street, so that drainage was out of the question. We entered without ceremony, and saw, by the light of a lamp suspended from the ceiling, the limits of an irregularly square room, some fifteen by sixteen feet measurement on the floor, by scarcely six feet in height. The inmates, twenty-two in number, were sleeping when we entered. One or two of them started up—gazed vacantly at us for a moment, and immediately sunk back drunk with sleep and the narcotism of the foul air. They lay in groups, in all attitudes, in beds and upon the floor—men, women and children, promiscuously. I observed four men in one bed, muscular and brawny subjects, having only a single sheet, which served, the time being, both shirt and covering for them all. Upon a mattress hard by, lay two men and one woman, in a similar state of *deshabille*. Then came half a dozen boys, closely packed in a row upon the floor. Young girls and little children, with tattered and scanty garments, occupied every inch of space that was left. All were slumbering heavily. On lines of ropes, crossing and re-crossing each other and attached to hooks in the walls, were suspended the ragged, still crawling garments of the sleepers. It was not a place for long tarrying. The atmosphere of the room seemed, in the hot night, the very condensation of pestilential foulness. In the few moments of our stay it made an impression, not on the senses only, but upon the brain, the effect of which was perceptible the next morning in an intense headache and vertigo, which lasted for most of the day. How beasts, much more human beings, can endure a night of it, is a mystery. I have visited the crowded between-decks of an emigrant ship, on its arrival after a long voyage, and only there have found a parallel. Can we wonder that disease, in its most aggravated form, comes forth from such dens as these? Philanthropy and sanitary laws, it is true, have done much in England of late years to mitigate these evils; but much, very much, remains to be accomplished."

At the London fever hospital, where most of these observations were made, two "fever mixtures" are used, the *mild* and the *strong*, and our readers may find them of service. The mild is

R—Liq. ammon. acetatis, ℥ii.

Mixt. camphoræ

Aquæ destil., aa. ℥ss.

This appears to be given at a single draught to patients who have the disease in its milder forms, and to be repeated as occasion requires. The "strong fever mixture" is

R—Ammon. sesquicarb. gr. v.

Mixt. camphoræ ℥i. ss.

of which one ounce may be given every fourth hour.

P.

An Examination of the question of Anæsthesia, arising in the Memorial of Charles Thomas Wells, presented to the United States Senate.
By the Hon. TRUMAN SMITH, U. S. Senator from Connecticut.
Pamphlet, pp. 135.

This is a reprint of a paper submitted to the consideration of a Committee of the U. S. Senate, in the session of 1852-3, to whom this subject was referred by that body, and was prepared by the friends of Dr. Horace Wells, who claim that he preceded others in the use of anæsthetics. Allusions were made in the October number of the MONTHLY, to the fact that Dr. W. T. G. Morton is soliciting endorsement and money to make up the neat little sum of 10,000 dollars for his pocket; and the reprinting of this pamphlet containing an excellent summary of Dr. Horace Wells' claim, is caused by his pertinacious begging. The Hon. Truman Smith, late U. S. Senator from Connecticut, who was a member of Congress at the time of its first publication, has prefaced it with some remarks upon Dr. M., and his reasons for now stirring this old subject. We had before heard the same statements made, but not quite so fully and completely. We therefore copy what Mr. Smith says, and if any one hereafter wishes to endorse Morton, or contribute money to his necessities, they can do so, but we shall continue to decline to do either.

While Morton was in Washington in pursuit of this object, (lobbying a bill for his benefit to the amount of 100,000 dollars,) his expenditures were understood to be very lavish. He took possession of one of the committee rooms at the House, and there and elsewhere proffered to members, both *actual* and *lobby*, a profuse hospitality. Champagne, segars, and oyster suppers abounded, and the idea seemed to be entertained that such seductive influences would aid powerfully his contemplated foray on the Treasury. The undersigned must not be understood, in making this statement, to speak of his own personal knowledge, but merely of what was currently reported, and generally believed. Being well assured that Morton was as destitute of property as his pretensions were of merit, it was for a long time a profound mystery to the undersigned where he could have obtained the means to sustain so much profusion. But ere long the veil was withdrawn, and the transaction stood revealed to the world in its true character.

W. S. Tuckerman, Treasurer of the Eastern Railroad Company, was detected as a defaulter early in the summer of 1855. It turned out on investigation, that he had robbed his employers of little short of a quarter of a million of dollars, and that no less than \$50,000 of the amount had gone into the hands of Morton in connection with this appeal to Congress—whether by way of purchase of an interest, or on some other terms, did not appear. Tuckerman, in the fall of that year, was prosecuted for embezzlement, and on the trial Mr. Benjamin T. Reed was introduced as a witness, and testified that Tuckerman

came to him and confessed his crime, and among other things said he had let Morton have a part of the money. Witness said: "He begged me to keep the name" (Morton) "secret, as" (if known) "it would prevent him from getting the money. I said I did not see how he could keep it secret. When I asked him if the amount was more than \$5000, he said it was more. I went as high as \$20,000. In each case before reaching that sum, when I asked him, he said it was more. I had my fears it was more, but I do not recollect he said it was more than \$20,000." At a subsequent period of the trial the same witness testified that Tuckerman "thought it important that the name of Dr. Morton should be kept secret, as he" (Tuckerman) "expected a large sum of money from that quarter, if confidence was not violated." On being cross-examined, the witness said: "I understood his object in making this request was, that the exposure might not affect the action of Congress. He said the Secretary of War had assented to the payment of \$50,000. Dr. Morton's name was the only one he then used. I supposed from his manner that the sum loaned," (meaning to Morton,) "was larger than he stated." On the same occasion Mr. Hooper was called as a witness, and testified: "He" (Tuckerman) "next spoke of advances to Dr. W. T. G. Morton to assist him in securing a patent at Washington, or in obtaining reward from the Government for his invention of Ether. He was surprised to find, by consulting his book, how much this amounted to. Dr. Morton, he said, was about to receive \$100,000 from the Government for his invention."

Soon after the detection of Tuckerman, the stockholders of the Railroad Company had a meeting, and appointed a Committee of Investigation, whose report, dated July 30th, 1855, is now before the undersigned. They found the aggregate amount of his embezzlements to be \$245,103.25! and that he had property and assets to the amount only of \$59,444, leaving a balance of \$185,608.25, for which no provision could be made, and which must therefore be a total loss to the Company. On pages 23 and 24 of the report may be found a statement of the objects or purposes to which Tuckerman had applied his plunder, and among them this curious item appears:

An investment of a kind and character which we are advised by the Counsel of the Corporation cannot be disclosed, even to us, without prejudice to the interests of the Company, and from which we are assured, and have reason to believe, the Company may yet derive great benefit, involved, as Mr. Tuckerman declares, in an expenditure of \$50,000!

It will not take a very sharp pair of spectacles to read under this verbiage the name W. T. G. Morton. It will not be difficult to find in these developments a true symmetry between the pretensions of Morton in their essential elements and characteristics, and the measures adopted to obtain for those pretensions the sanction of Congress, at a cost to the Treasury of \$100,000. Tuckerman was surprised, on consulting his books, to find how much he had advanced to Morton. Probably he was not, after robbing the U. S. Mail several times, very much surprised to find himself (as he has recently) at the Connecticut

State's Prison at Wetherfield. What an admirable fitness was there in the selection of *such a financier* to respond to *lobbying exigencies* at Washington!

We have, in the facts alluded to, an explanation of another mystery, and that is, why Morton has not persisted in his solicitations at Washington, particularly as, according to Tuckerman, the Secretary of War was prepared to countenance an appropriation of \$50,000. The reason may be found in the fact that every cent which he might thus obtain would have to be handed over to the Eastern Railroad Company, to supply (in part) a sad vacuum in their exchequer, made in the manner already explained. Hence Morton, fully determined to "put money in his purse," has turned from Congress to the public, and is now appealing to the humane, the generous, and the affluent, to recognize him as the author of Anæsthesia, and to reward him as such with a munificent token of their gratitude and esteem.

It is submitted, that Morton has no moral right to one penny to be derived from his pretensions, even though those pretensions be deemed genuine; all is pledged to the Eastern Railroad Company. To pass by the Representatives of the People, and to address his solicitations to the people themselves, (thus ousting the Company of all beneficial interest,) is a mean artifice or subterfuge, such as no man of honor can either practice or approve. Whether Morton should succeed in such an undertaking, let the public judge in view of these and other facts disclosed in the subjoined papers.

Diseases of the Urinary Organs; a Compendium of their Diagnosis, Pathology and Treatment. BY WILLIAM WALLACE MORLAND, M.D., &c., &c. With Illustrations. 8vo, pp. 579. Blanchard & Lea. 1858.

It requires no little talent to make a good compendium, and it is for this reason that they are so frequently failures. Hasty and imperfect collection of materials, and a marked prominence of the frequently crude opinions of the author, are apt to be the characteristics of such books; so that a new one is looked upon by us with some suspicion. Notwithstanding this, we have given the one before us a careful examination, and can say, without fear of contradiction, that it is a very excellent book. Dr. Morland has a happy faculty of weighing the value of his materials, and of giving no undue prominence to that which does not deserve it; while that which is worthy of notice and remembrance is carefully preserved. The absence of any tendency to ride the hobbies of the physician is especially noticeable, and is not less refreshing that it is rare. As illustrations of this, reference may be made to what is said of Syme's operation for Stricture, and con-

cerning Addison's disease of the supra-renal capsules. The latter is the best estimate that we have anywhere seen of the amount of reliance that ought to be placed in the observations hitherto made.

The work is divided into two parts, the first treating of the *diagnosis*, and the second of the *pathology and treatment* of these diseases. Separate chapters in each are devoted to the affections of the supra-renal capsules and to diseases of the kidneys, ureters, bladder and urethra. The illustrations are not numerous, and are old acquaintances which wear well. The book is well printed and unusually free from the disfigurement of typographical errors. Take it for all in all, we consider it one of the most valuable practical books that has lately been issued from the press, and the *best* compendium upon this subject that we have ever seen.

P.

PROCEEDINGS OF SOCIETIES.

New York Pathological Society. Regular meeting, May 26, 1858. E. HARRIS, M.D., Vice-President, in the Chair.

Œdema Glottidis.—DR. A. CLARK presented a specimen of œdema glottidis, secondary to erysipelas of the head and face. The case occurred in the practice of Dr. Peugnet, at Blackwell's Island Hospital, the history of which is as follows:

Patrick Coffee, aged 80, an Irishman, partially insane, an inmate of the almshouse since the 28th of December, 1857, was sent up to the hospital on 7th inst., laboring under an attack of diarrhœa and œdematous erysipelas of both ankles. Ordered pil. plumbi et opii, repeated every hour; also diffusible stimulants, as patient was very weak. Discharged him on the 15th inst., cured.

Was called in to see him in his ward on Tuesday, 18th inst. Found on examination that he had traumatic erysipelas of left eye and forehead, resulting from a cut that he had received a day or two before whilst going out to the privy. Ordered ʒss. tinct. cinchonæ co. every two hours.

19th inst. Patient doing well.

20th inst., 8 A. M. Erysipelas had entirely disappeared from left eye, but had extended to right side of forehead, right eye, right cheek, and right side of neck, extending from the trachea to the anterior bor-

der of the trapezius muscle; pulse very weak. Ordered gr. i. quinine every two hours.

4 P. M. Went in just as the orderly was about giving him the quinine; he swallowed it with great difficulty. Upon examining him, found that the act of inspiration was performed with great difficulty, whilst the expiration was comparatively easy, and upon attempting to touch the trachea or larynx, that the dyspnœa was very much increased; patient making efforts to take my hand away, but too weak to do so.

Considering this to be a case of œdema of the glottis, following erysipelas, I called in Dr. Van Wagner, senior of the staff, Dr. Gallagher, and my colleague at the almshouse, Dr. Wan, who all agreed as to the diagnosis; and the only means left to relieve the patient was to either perform Dr. Buck's operation, laryngotomy, or tracheotomy. Dr. Buck's operation was thrown aside, as it was impossible to open the patient's mouth, leaving the other; but considering the age of the patient and the coldness of the breath and cadaveric odor which was beginning to manifest itself, we concluded to allow him to die peacefully. Dr. Sanger sanctioned the conclusion which the staff had come to.

The patient died about 12 that night.

Autopsy.—When the larynx was first removed the œdema was very considerable, and the trachea was filled with viscid mucus. A considerable portion of it is still to be seen. There is a certain degree of redness still visible. The chief interest in this case is the fact that it is the second case of fatal œdema glottidis following erysipelas of the head and face occurring in the same institution within a short time.

Extraordinary Vegetations of Mitral Valve.—DR. CLARK next presented a specimen for DR. CHARLES K. BRIDDON, with the following history of the case:

Mary F. S., aged 27 years, married, the mother of three children, two alive, the youngest six years old, has no hereditary predisposition to disease, her parents living, and in the possession of good health; has not suffered from any previous disease of an acute nature, except an attack of rubeola during childhood; she was never strong, and as a child was weakly, though never decidedly sick. Within the last few years she has complained of precordial weakness, sensation of sinking at the epigastrium, shortness of breathing, and constipation of the bowels; during the past few weeks these symptoms have become more annoying, her appetite has failed, and the digestive functions have been impaired; her catamenia, previously regular, have been absent six weeks, and for some weeks past she has suffered occasionally from

vague, wandering rheumatic pains, not implicating the articulations; they are subacute in character, and appear to locate themselves principally in the muscular and periosteal tissues.

January 7th, 1858. General appearance anæmic, skin and complexion pale and somewhat sallow, tongue coated, appetite deficient, and the gratification of it followed by uneasiness and pain, bowels obstinately costive, urine secreted in proper quantity, S. G. 1020, no precipitate by heat or acid; patient complains of headache, languor and debility, pains of a rheumatic character in various parts of the body, most severe in the great toe and along the shaft of the ulna, where there is tenderness and slight tumefaction; she has had copious night sweats during the last week, which have been preceded by slight febrile movements, but no chills.

Physical examination of the lungs elicits nothing abnormal, resonance is clear and equal on both sides, and the healthy respiratory murmur is heard equally distributed over all parts of the chest.

Palpation of the abdomen detects nothing but dullness, indicating the presence of the liver below the costal cartilages.

The patient continued in much the same condition until February 22nd, when Dr. Alonzo Clark was called in consultation, and detected a murmur with the first sound of the heart, most audible at the apex, which struck the thoracic parietes four inches to the left of sternal centre. Diagnosis, *mitral regurgitation*.

23d. On rising from bed this morning the patient was attacked with vertigo, staggered across the floor, and was saved from falling by her mother; when visited two hours after the attack she complained of severe frontal headache, the following morning her articulation became indistinct, and the day after the right upper and lower extremities were found paralyzed, deglutition was difficult, and complaint was made of the throat and head; the fauces were healthy, the tongue coated with a brown fur, and when protruded inclined slightly to the right, sensibilities blunted, pulse 70, and of full volume.

25th. Condition much the same; sensibilities more blunted, pulse 74, tongue covered with moist brown fur, bowels costive and relieved by enemata, bathed in perspiration, complains much of head and throat. Dr. Clark expressed the opinion that it was probable that a vegetation had been detached from the mitral valve, and that, being carried through one of the carotids, it had obstructed some of the vessels, carrying the nutrient supply to the brain.

26th. General condition and articulation improved, patient feels better, but suffers from retention of urine, which was relieved by cathe-

ter; bowels still obstinately costive, and feculent accumulations are detected in the colon.

27th. Continued better until evening, when headache returned, with perspiration preceded by flushed face and febrile movement.

28th. Is stupid, bathed in perspiration, pulse 80, bowels costive and painful, complains of headache, tongue color of coffee grounds, but moist, has no appetite, bladder evacuated by catheter.

29th. Headache still severe, sweating profusely, bowels and bladder as yesterday, paralysis of extremities unchanged, articulates better, and the protruded tongue does not deviate from the median line.

30th. As yesterday, the returned enemata contain masses having a gelatinous appearance, and resembling the jelly of boiled starch.

For the next four or five weeks the patient remained in much the same condition, with the exception of a gradual amendment in articulation; she had distinct but irregular remissions and exacerbations, which did not yield to anti-periodics, the gelatinous substances discharged from the intestinal canal assumed a more membranous appearance, and she had occasional attacks of dyspnœa, twice she had attacks of vertigo, one of which was followed by temporary deafness; she continued to suffer from headache, and according to her own expression had queer feelings within the cranium, surroundings looked strange and unusual.

Early in March she began to complain of pain in her left side, and palpation detected the spleen extending several inches below the costal cartilages. Pressure upon the organ elicited the existence of tenderness, and during the two following months her principal complaint was of the pain in that viscus; she was unable to lie on her left side, and the paralyzed side became œdematous in consequence of her maintaining that position. Once or twice there was increase, or partial return of voluntary motion in the right upper extremity, but it was not permanent; she had one or two severe attacks of dyspnœa, and irregular febrile movements followed by sweats; but towards the close of her life her constant complaint was of the pain in her side, the abdomen became moderately tympanitic, and typhoid symptoms supervening, she died on the 18th of May.

Autopsy eleven hours after death. Rigor mortis well marked on left lateral half of body; the extremities on the right side were flaccid; emaciation marked, but not excessive; ecchymosis on left lower extremity, back of wrist, and on the left side of the trunk; the left extremities were also œdematous.

Thoracic cavities on each side contained about sixteen ounces of

transparent straw-colored serum. There were no pleural adhesions, and the lungs were perfectly healthy.

Pericardium contained about ten ounces of clear serum. Heart, when removed, weighed twelve ounces after the removal of a moderately firm clot from the left ventricle; the right ventricle contained a non-adherent, transparent membrane, but no clot; the muscular tissue of the heart appeared to have undergone degeneration, being changed in color. The walls of the right ventricle were two lines thick, those of the left ten lines. The valves of the right heart were healthy. The aortic valves were each the seat of very small vegetations arranged in the situation of the corpora arantii. The mitral valve was the seat of extensive disease; it appeared to have completely lost its character as a valve; each flap resembled a shaggy mass of vegetations hanging pendulous into the ventricle. The right flap appeared to have been split and worn away. Some of the vegetations were loose and pedunculated, and one about ten lines long was almost detached. There were similar growths on the chordæ tendineæ, and columnæ carneæ.

Abdominal cavity contained about two quarts of clear straw-colored serum; peritoneum was healthy with the exception of two points, where the omentum had become adherent to the spleen. The liver was enlarged, but apparently unchanged in structure; it reached a hand's breadth below the ensiform cartilage; its edges were sharp; color and consistence natural. The gall bladder was distended with healthy bile. Kidneys, supra-renal capsules and pancreas were healthy. The colon was unusually contracted, and its mucous membrane, as well as that lining the small intestine and duodenum, was thickened, softened, and everywhere covered with an adhesive gelatinous exudation. In some places masses of false membrane were detected, resembling those discharged during life.

Stomach was healthy.

The spleen reached three fingers' breadth below the left costal cartilages, and was adherent at two points to the omentum. When removed it weighed seventeen ounces. In its lower two-thirds it was natural in color and consistence, with the exception of at one circumscribed spot, an inch and a half in diameter, where it had contracted the above mentioned adhesion. On making a section through this, the change in structure, or deposit in the substance of the organ, contrasted remarkably with the surrounding healthy parenchyma. It consisted in, or was formed by, a central mass of a bright yellow color, surrounded by a well-defined pure white substance one line in thickness, and having on its outside a zone of purple which merged into the

healthy structure of the viscus. The upper third of the organ was more enlarged, and evidently the seat of more recent change in structure; it was more tumid and pulpy, its color changed to a reddish chocolate brown, studded here and there with yellowish and gray spots, and the line of demarcation between the healthy and diseased parts was well defined. To a portion of the surface was adherent the omentum, and on incising through this the capsule was found thickened, and but loosely adherent, the substance of the spleen disintegrated, and converted into a watery chocolate-colored mass.

Unfortunately permission could not be obtained to open the head, where in all probability lesions would have been discovered which would have completed the history of the case. Presumptive evidence, however, is abundantly supplied in the symptoms exhibited during life, the paralysis indicating some lesion within the cranium. The attack of vertigo occurring on the 24th of February, followed in twenty-four hours by gradual paralysis, does not belong to the history of apoplectic effusion; the head symptoms following, the blunted sensibilities, and various nervous phenomena pointed to impaired nutrition of the cerebral nervous centre. Such was the opinion expressed by Dr. Clark, and the existing condition of the heart led by a process of inductive reasoning to the conclusion that the defective nutrition of the brain was caused by the occlusion of some of its nutrient vessels by a vegetation detached from the cardiac valves. Dr. Clark expressed the opinion that recovery might take place if softening did not result; the condition of the patient was an unfavorable one, but inasmuch as she survived the head trouble nearly three months, it is probable the issue would have been favorable but for the complication in the abdominal viscera, which were undoubtedly the cause of death.

DR. CLARK then remarked: One of the chief points of interest is the extraordinary development of vegetations upon the mitral valve, with a slight amount upon the aortic valve. The organs, when removed, weighed twelve ounces. The spleen was enlarged to nearly three times its natural size, and was the seat of a kind of degeneration that has not been fairly studied. The upper portion is tumefied, as if a heterologous deposit had taken place there. At its lower portion there is a smaller mass of the same kind of deposit, still more distinct in its character. That this is the result of an inflammatory action, is rendered pretty evident from the fact that the omentum is adherent at this point. The deposit differs but little in its microscopical characters from that of the structure of the healthy spleen. It seems to be made up mainly of cells of the same character as in the

healthy spleen structure, possesses few or no blood vessels, scarcely any fibrous tissue, and the border surrounding it, connected with the healthy portion of the organ, is intensely injected. The outline in the smaller deposit is perfectly distinct; in the larger, equally distinct, but the contrast of the morbid and healthy portion not so striking.

There is another feature in this case which is illustrated by the material which was discharged from the intestinal canal.

In regard to the discharge from the intestinal canal, its character will be seen. He had brought up a few specimens of an analogous kind, discharged from persons, most of whom are now in health. They all have the same microscopical characteristics. It is not an uncommon occurrence to notice this material discharged as the result of irritation from fœcal accumulations. This effusion from the mucous membrane that has a membranous appearance, has very variable characteristics in different specimens. In some, it appears as well formed as the old false membrane of croup; in others of a more recent deposit in that condition, and in still others a mere tough mucus that holds certain cells in its substance, which are not all pus cells, but cells of a character which, under more favorable circumstances, would have been susceptible of plastic changes. In conclusion, Dr. C. hoped that the rule not permitting discussion of a case presented by a candidate for membership be waived in this instance. After a little discussion the suggestion was adopted, and accordingly,

DR. POST asked how long the cardiac symptoms existed?

DR. CLARK.—The cardiac symptoms were scarcely recognized until the day of the discovery of the valvular murmur, though it was noticed that she was short of breath in coming up stairs for a month before.

There was another interesting feature in the case: the occurrence of chills, with a considerable regularity or rather chilliness followed by fever and sweats. These continued more or less regularly from an early period of her sickness until her death, yet there was no abscess recognizable, no pyemia, no disease of the lungs, no exposure to miasmatic influences. The attack did not yield to quinine. It is a case in which he had been able to make (what seemed to him) a pretty clear diagnosis, during life, of paralysis arising from obstruction of the artery from vegetations of the heart, and he cannot entertain any more doubt of it being the cause of the paralysis than if it had been demonstrated. The murmurs changed on the day that the paralysis occurred. This paralysis became complete in twenty-four hours, and remained so for nearly three months.

DR. FINNELL asked if the deposit in the spleen was not the result of fibrous inflammation?

DR. CLARK thought not, as it resembles very much specimens he had examined in which scarcely a trace of a fibre could be seen. He had not, however, examined this. In other specimens he has found cells to exist the same as in other portions of the healthy tissue, but not a blood vessel nor blood corpuscle could be discovered, while the other was full of them.

DR. HARRIS asked if the membrane discharged from the intestinal canal had any connection with the paralysis?

DR. CLARK thought not.

DR. HARRIS remarked, that he had met with a case of paraplegia in which such a gelatinous membrane appeared in considerable quantity and highly organized, connected with constant constipation of the bowels.

DR. CLARK.—A patient of Dr. Bogart's, in Fifth Avenue, has for months been discharging large quantities of this material.

Œdema Glottidis.—DR. FINNELL's first specimen was similar in some respects to the first one presented by Dr. Clark. It was removed from a patient thirty years of age, who entered St. Vincent's Hospital, suffering from phthisis. The disease was far advanced, he having had night sweats, purulent expectorations, &c. He was able to get about the wards until a few days ago, when he complained of distress about the throat and difficulty of breathing, and after a few hours died. On autopsic examination, the œdema glottidis was well marked, the trachea and larynx were also filled with a glary mucus.

Endo-Metritis.—DR. FINNELL next exhibited the uterus of a woman æt. 31, who died from endo-metritis. She was buried one week ago last Sunday, from the house of a professed abortionist. The funeral being very sparsely attended, and carried on in a very quiet way, aroused the suspicions of the neighbors, and accordingly an investigation was entered into. The body was examined one week afterward, and showed very clearly that there had been a child delivered at or near the full term. There were also observed well-marked appearances of endo-metritis. Portions of the placenta are adherent. The mucous membrane is seen to be covered with exudations at certain points. The points of inflammatory action are most marked at the cervix. If the under wall be pressed, pus will flow out. At the upper portion of the vagina there was an intense vascularity. Near this point were two small openings.

Foreign Substance in the Trachea.—DR. FINNELL's third specimen

was the larynx and trachea of a child, 1 year and 8 months old. The child was playing with its little sister, when he swallowed several peanuts. He soon after began to suffer from symptoms that were referable to the throat. He was brought to a druggist, who attempted to force the substance down into the pharynx with a quill, without effect. The child was brought home, when he began to show evidence of obstruction in the larynx and trachea, and he was treated by a physician for croup. Leeches and other remedies were used. He died thirty hours after the peanuts were swallowed. On making the autopsy, one of the peanuts was found imbedded in the trachea just below its first or second ring.

Gunshot Wound of the Abdomen.—DR. FINNELL'S fourth specimen shows the effect of a gunshot wound in a suicide, caused by the discharge of a heavily-loaded pistol against his abdomen, the load tearing away everything in its passage. There was a large quantity of shot in the spinal column, some of them he removed, to the number of thirty-seven. The liver presents the appearance of being fractured from its anterior margin backwards. Portions of the liver have been torn away.

Wound of Heart and Abdomen.—DR. FINNELL'S last specimen shows the effect of stabbing. Here is the liver and heart, the latter has a wound at its apex. It occurred in a quarrel between a mate of a vessel and a sailor, the latter inflicting the injuries. Besides those alluded to, there were two or three large cuts across the face, one deep into the shoulder, another through the biceps, and another through the lower portion of the abdomen. The apex of the heart is cut, as you will see, the right ventricle is opened into, and the cavity of the pericardium was filled with blood. From the direction and character of the wounds inflicted, it showed conclusively to my mind that they were inflicted with a slashing movement, rather than any other.

DR. WHITE, in connection with Dr. Finnell's third specimen, referred to a case that came under his notice a number of years ago, where a child swallowed a bean which was drawn down into the right bronchial tube. The situation could not be determined, but an operation was attempted, which failed. It seemed that the foreign body first lodged in the trachea, and was afterwards by inspiration or manipulation forced down into the place where it was discovered at the *post-mortem* examination.

DR. CLARK asked, in connection with Dr. Finnell's second specimen, (showing the effects of abortion,) if any peritonitis existed?

DR. FINNELL.—No, sir, there was none whatever.

DR. CLARK stated that it was rather unusual that this form of disease occurs without some peritoneal inflammation.

DR. POST, in connection with Dr. Finnell's first specimen, (œdema glottidis,) stated that the tumescence of the aryteno-epiglottidean folds seemed to be owing rather to the deposit of fibre than to the infiltration of serum. He referred to a case of this kind that came under his observation, where all the symptoms of œdema glottidis presented themselves, where Dr. Buck's operation was resorted to without success, and it turned out to be a case of fibrinous infiltration. In answer to a question from Dr. Harris, he stated that this variety of disease came on as suddenly as the true œdema of the glottis; in fact, was like it in every respect, except only as far as the result is concerned.

DR. MARKOE observed that it was difficult to ascertain the exact situation of foreign bodies in the trachea, inasmuch as the relative proportion in size between the chink of the glottis and the calibre of the trachea was so great that if a body passed the glottis it could go past the bifurcation. He thought that tracheotomy ought to be performed, and give the patient a chance to discharge it by that means.

DR. POST said that in case the body lodged itself in the larger bronchial tubes there would be a constant disturbance of the respiration, with cough and purulent expectoration. He referred to a student of his, who had a foreign body lodged in this way for three years, during all of which time he suffered from hectic fever, night sweats, &c. At the end of that time it was finally ejected, after which he regained his health.

DR. BIBBINS asked if the patient was held up by the heels if there would not be a fair chance for the expulsion of the foreign body.

DR. POST.—That was tried in the case of Mr. Brunell, and it brought on very violent spasms, but in his case the foreign body was a very heavy one, being a gold sovereign. After tracheotomy was performed and air was allowed to enter independent of the glottis, the success was complete—the glottis becoming relaxed for the passage of the body. He recollected a case where tracheotomy was performed by Dr. A. H. Stevens, where the patient had caused a watermelon seed to enter the trachea, and it was ejected several days afterward through the natural passages.

Product of Abortion.—DR. T. M. MARKOE exhibited a mass that came away from a lady who had been married about three months, and had supposed herself pregnant a little over two months. From the time of her marriage she suffered a good deal of pain and uneasi-

ness in the neighborhood of her womb. This assumed rather a more severe character during the last two or three days. Yesterday they were very severe, and attended with a little flow of blood. In the night the pain and hæmorrhage increased. I saw her soon after, and recognizing the imminence of abortion, kept her quiet, but this morning this body was thrown off. From that time the pains have ceased, and the flow has entirely stopped, which circumstance indicates pretty certainly that abortion is complete. He presents the specimen because it belongs to a series of cases of abortion in which the product of conception is not a complete ovum—sometimes this product being merely a false membranous exudation like that of dysmenorrhœa, or sometimes it being the true product of conception originally, in which the fœtus is flaccid, and disappears while the appendages are developed to a certain extent and then come away. This specimen, said he, is a large and bulky body, having had the form and shape of the uterus. No true membrane was found anywhere about it, or in it, and there was no portion of the fœtus near it, or with it.

DR. GARDNER thought that the membranes had arrived at too great a degree of development to warrant it being called dysmenorrhœal. There is, said he, plenty of dysmenorrhœa in virgins; they never discharge anything more than a little stringy matter, but in married folks it is different.

DR. CLARK thought that there could be no difficulty in settling this matter by the microscope, inasmuch as the chorion forms early, and it was entirely distinct from any other structure. The membrane of dysmenorrhœa is merely an attempt at ordinary fibrous organization. The two tissues are just as distinct as any two can be, inside the body. He stated that there were a great many specimens presented of a doubtful character, owing to the infiltration of blood in its substance, which when carefully examined were found to possess all the characteristics of the membranes of the embryo. The simple fact that the ovum is not found he would not attach much importance to, as it is easy to conceive how it may be thrown off during the contractions of the uterus.

Fœtus.—DR. KRAKOWITZER presented a specimen for Dr. Henshell—a fœtus expelled last Monday morning, with the membranes unruptured at the end of six months' pregnancy. The patient was taken with pains last Monday night, when the fœtus was expelled. The size of the fœtus, it will be seen, does not correspond with the time of its development. It is likely that it died when only 4 weeks old. The cause of death is the arrest of the circulation by a twist in the funis.

The funis in this case was rather long. There was a large clot of blood adherent to the inner surface of the placenta. He thought this was a condition to which not much attention had been directed.

DR. THOMAS stated that it did not look like a case of placental apoplexy.

DR. KRAKOWITZER thought it was secondary to the twisting of the funis.

DR. THOMAS remarked that it was stated by Prof. Simpson that successive abortions are almost always connected with a fatty degeneration of the placenta, which possibly might be the case in this instance.

DR. KRAKOWITZER had not examined it.

Uterine Polypus.—DR. GARDNER on the 30th Jan. last was called to a woman who was supposed to be aborting at the second or third month. She had been flooding at repeated intervals for five or six weeks. She had a child 18 months previously, and had menstruated regularly for several times, then menstruation ceased, and she supposed herself three months pregnant. She had at that time been in labor six or seven days, had severe pains and a great amount of flooding. The os, the physician informed me, had been rigid, and he had endeavored to relax it by the warm douches. There was a discharge from the vagina, very considerable in quantity, and very offensive. He made an examination, passed his finger into the os, and removed a mass which was very much broken up, and while doing this he discovered a polypus. He endeavored to extract it, but succeeded only in bringing away a very small portion; from that moment the foetid smell ceased. Soon after some pyæmic abscesses formed—one in the neighborhood of the uterus which broke into the rectum, and the other, which is rather more obscure, formed in the chest, broke, and was expectorated. She went on suffering from chills, &c., for two or three weeks longer, when they gradually ceased. Still there was uterine irritation present. The polypus was still there. Sponge tents were passed, dilating the os gradually until four weeks ago, on Sunday, when he got in the *écrasseur*. The tumor was four inches in length—the pedicle was two inches in length, and about one and a half inches in thickness. It was impossible to introduce the *écrasseur* around it, and therefore he took hold of it with a forceps, and all he succeeded in doing was to pull off the tumor. Since that time the patient has gone on pretty well. A few days ago I made an examination; the os was closed and the uterus was still much enlarged.

Stone from Urethra.—DR. LIVINGSTON presented a little stone from

the urethra of a little boy 17 months old. It had become impacted, and he was unable to pass his water for thirty-six hours. The bladder was very much distended, and before I saw him it was thought to be an abscess, and was poulticed. On examination I detected the nature of the difficulty at once, and immediately proceeded to extract it; this I did with a small triangular instrument used for extracting bullets.

DR. DALTON next presented for Dr. Detmold a small calloid tumor removed from just above the lumbar region, by Dr. Detmold. On cutting into the tumor quantities of colloid matter were seen, (not cancerous,) separated by sheets of areolar tissue.

Regular Meeting, June 23, 1858. E. R. PEASLEE, M.D., the President, in the Chair.

DR. T. C. FINNELL presented several specimens, the first of which was that of the head of a child two and a half years of age, that died of hydrocephalus and marasmus. The largest measurement of the head was 15 inches, bi-mastoid diameter 15 inches.

Rupture of Liver from violence.—The second specimen was a ruptured liver, removed from a woman 30 years of age, who was kicked by her husband a short time previous to death. She died four hours after the reception of the injury.

Autopsy discloses a fatty and somewhat enlarged liver. The abdomen contained about two quarts of partly coagulated and partly fluid blood. There was also seen a rupture of the liver, which extended from the surface completely through to the other side. There was no discoloration on the surface of the body.

DR. CLARK, in connection with the first specimen, remarked, that there were two forms of chronic hydrocephalus, one attended with thickening of the membranes, showing an increase of vascular action, if not inflammatory; it is very decidedly hyperæmic. In other instances, there was nothing of the sort, simply a dropsy. In the first class of cases it seemed altogether likely that some modification of the treatment adopted in acute hydrocephalus would have some chances of being successful. He thought it was of interest to fix, as near as could be done by symptomology, progress of the case, &c., whether thickening of the membrane or dropsy existed. In view of these facts, he asked Dr. Finnell whether the membranes were examined in this case.

DR. FINNELL stated that no careful examination of them was made; about ten oz. of fluid escaped.

DR. CLARK.—Did you notice any shrinking of the brain matter?

DR. FINNELL.—No, sir. It will be seen that the fontanelles are closed.

DR. HARRIS asked, in connection with the second specimen, if the kick by the husband was deliberate.

DR. FINNELL.—Yes, sir; but it was stated by one of the parties that vomiting might produce it, and that the blow was not severe enough to produce the results.

DR. CLARK thought there was on the records of the Society a case of spontaneous rupture of the liver. In that case, if his recollection served him right, there was a considerable amount of softening around the seat of rupture. There seemed to be almost a solution of the liver structure before the blood vessels gave way. In Dr. Finnell's case, he thought that the liver, though not firm, was not softened to any extent; that the rupture might be accounted for in that way.

DR. PEASLEE.—The fact that it is a fatty liver would seem to argue that a less amount of violence would be requisite in bringing about such a result.

DR. BATCHELDER asked if it was not very generally the fact that, in laceration of internal organs, there was no mark of any external violence? In all the cases that he had seen where viscera had been wounded, there was no mark of any external violence upon the surface.

DR. GOULEY referred to a case that occurred in Bellevue Hospital, of a man who died from a fall from the third story of the house, causing a compound fracture of both legs. On opening the cavity of the abdomen it was found filled with blood. One kidney was ruptured completely across. There were a few marks of bruises externally, but none in that locality.

DR. FINNELL stated that he had presented several specimens of rupture of the intestine from violence. In most, if not all the cases, there was no mark of external injury. In one case, of a boy, a large brown stone lintel fell a distance of ten or twelve feet upon his abdomen; peritonitis was the result of a rupture which it caused. He died. There was no mark of any violence whatever upon the integuments. I have been asked, said he, upon the stand, if such a thing was possible. I have answered generally that such things are not at all uncommon.

DR. HARRIS referred to a case of a woman who was run over by a rail car, where all her internal organs were terribly lacerated, yet there was nothing externally but a slight abrasion upon the back.

DR. FINNELL's third specimen was a femur, from a man *æt.* 50, a

subject in the dissecting room. It is very much bent, and turned upon itself as if the bone had been twisted inwards. Commencing at the great trochanter and extending down nearly to the middle portion, there is a greater convexity, and the bone is altered at that point. On making a section, the medullary canal is seen almost completely blocked up with cancellar structure. It has resulted from one or two things—either the patient must have had rickets in early life, in which case other bones ought to be involved, which, however, is not the case; or, it might be the result of bending of the bone in early life, and this effect might be the result of tissue. Then, again, it might be a fracture.

DR. GOULEY thought that the medullary canal was really more pervious than it seemed. This, he thought, was owing to the fact, that from the peculiar bend of the bone, the saw did not pass fairly through its longitudinal axis.

DR. POST thought it was probably the result of a bent fracture in childhood—hence the irregularity in the canal as well as outside. He thought it could hardly be the result of any disease.

DR. PEASLEE said that it seemed to him, that nothing but muscular action would give that bone that precise bend. If it was from the weight of the body, as in rachitis, the bend would be more gradual. It proved to his mind pretty conclusively, that there was a fracture at some time with very little displacement, until the muscles brought in their forces to destroy the relation of parts.

Connection of Penicillum Glaucum, with nervous troubles.—DR. ALONZO CLARK next followed, with some very interesting remarks upon the connection of the deposit of the penicillum glaucum in the urine, with certain nervous troubles. He said: Within the last year it is known to some members of the Society, that his attention has been a good deal directed to the nervous condition of the system, associated with certain deposits, or certain productions in the urine. He is quite prepared, after having collected a pretty large number of cases, to make this general statement; that in many of the forms of nervous diseases, which have occasioned much anxiety and difficulty of diagnosis, the derangements are produced by a special poison, which, circulating in the blood, produces its effects, first upon the nutritive system, (if he may be allowed to call the ganglionic by that name,) and secondarily, upon the voluntary or reflex system. It is with reference to that point that he proposes to occupy a few minutes.

It is now perhaps fifteen years since Golding Bird first called the attention of the profession to the influence of the oxalic diathesis—that

is to say, to those symptoms that seem to have some connection with the presence of oxalate of lime in the urine. In the last edition (1853) of his work, he makes a distinction; he divides oxaluria into two classes, one in which there is oxalate of lime, without any increase of the extractive matter; the other where the oxalate of lime exists, with an increase of the extractive matter. He (Dr. C.) is prepared to add another class, that in which the *extractive matter* exists without the oxalate of lime.

The only novelty that he has to present in these cases is, that the extractive matter seems to be of an animal character—that is to say, it is in no manner connected with the solution of the constituents of the urine.

It seems to him to be the result of imperfect disassimilation, (if he may be allowed the use of a double negative.) So far as his knowledge extends, this extractive matter has more the character of gelatine than of albumen.

The urine containing it does not coagulate by heat or nitric acid; in fact, it presents none of the recognized tests for albumen. It has, however, a test of its own, one furnished by nature. It produces for a certain length of time, varying from one day to one week, food for the commonest form of mold—the *penicillum glaucum*. It occurs in spores, these germinate like the spores of the *torulæ*, by little buds set off from one extremity. By and by some are observed to extend themselves into the stem, which is known by a proper name. This rises to the top of the water and there grows into little branches, and on the top of the water finally germinates again. This variety of production is found to grow on boots, cheese, and in a great many substances that contain animal matter. The production of this *penicillum glaucum* in the urine is the result of some imperfectly decomposed animal matter. In all the cases where this production is found, there are some unnatural conditions of the nervous system.

In a patient, for example, of Dr. Stelle, who had hysteria, a young woman of 20 years of age, who suffered from violent pains and feeling weak and uncomfortable, had a disposition to sleep, and slept for several hours. The examination of the urine disclosed a vast amount of *penicillum glaucum*, and it also contained an abundance of oxalate of lime. These two substances go together in nine cases in every ten in which either occurs. Then it is again without; then a very small proportion in which the *penicillum glaucum* will be produced, and yet there will be no disposition to the formation of the oxalate of lime.

Dr. C. then referred to a case of Dr. Van Buren, in which the most

extraordinary symptoms presented themselves. One day the patient would be singing, cheerful and sprightly, the next she would be morose and sullen. One day she would have severe pains through her chest, then through her stomach, when she would vomit considerably. At one time she would be all watchfulness, and then again do nothing but sleep. Her urine was examined and found to be heavily loaded with oxalate of lime. During one week in the morning there would be an abundance of the penicillum glaucum, while in the evening there would be present torulæ. The next week the reverse would be the case in the morning urine the torulæ would exist, and in the evening the penicillum glaucum would be present, indicating the existence of undecomposed animal matter in the urine. A common symptom connected with this disease is dizziness; a rare condition, is depression of the pulse.

A woman came into the hospital a few months ago, whose history was this: She had been at her work as usual, when she suddenly became so dizzy that she could not stand. At the time she came in her pulse was 52, and did not rise above that for several days, yet she was up and walking about, and had the look of a person in pretty good health. Her urine was found to contain oxalate of lime, and in twenty-four hours afterwards there was an abundance of the spores of the penicillum glaucum. She remained about the hospital for a little time, became a little insane, and seized an opportunity to throw herself into the river.

In another instance, a patient of Dr. Hall, a butcher, doing business near here, a stout healthy-looking man, had been troubled with dizziness; this increased to such an extent as to give him great anxiety. There was no evidence of any cerebral disease, but there was found an abundance of oxalate of lime, and the penicillum glaucum made their appearance after a few days' keeping. Dizziness is common, but by no means constant.

Almost any nervous derangement that cannot be accounted for by a reference to known pathology, subjects itself to the suspicion of being produced by this certain something circulating in the blood, acting as a poison to the nervous system.

The cases in which this particular state of things exists turn out to be very numerous. He sees a case almost every day in which this oxaluria exists. In almost all of them there is that capability to produce the penicillum glaucum.

In regard to the mode of managing these cases so as to relieve patients from their sufferings, which are for the most part very intense. Many in-

deed have told him that life was not worth having at such a cost, and are very sorry to hear that the disease is not likely to prove fatal. This was particularly true of a gentleman from Cincinnati, in whom this particular diathesis was more marked than any male that has come under my notice. It is gradually wearing him out.

It does not seem to him that Bird's plan is the best. It will not cure in the majority of cases. As for treatment he will not give any; the remarks already made are in relation to the production of the penicillum glaucum, the causes and the symptoms connected with it.

There are two or three theories in regard to the mode in which oxalate of lime is produced. The chemical constitution of carbonic acid gas is such that when a certain amount of oxygen is added it becomes carbonic acid gas. One theory is, that it is produced because in this instance the carbonaceous materials are not completely disassimilated, and that the oxygen is not appropriated in sufficient quantities to make the combustion complete; and to get rid of the oxalic acid, and consequently the oxalate of lime, it is necessary that there should be a certain amount of oxygen added to the decomposing material. Another theory is, that it is incompletely formed uric acid. He had no opinion about it. In regard to it further inquiry is necessary. The main point that he had in view was to find a solution of the vast number of diseases which we have been accustomed to denominate hysteria, gastric derangement, &c., that really the "head and front of the offending" is in this substance, remaining in the circulation, serving as a poison to the nervous system precisely as urea does under other circumstances. The manifestation of the two substances are different. He may here remark that urea generally exists in a large proportion in these cases. The specific gravity of the urine is very high.

Another remarkable thing is the fact that the more abundant the penicillum glaucum is the more reluctant is it to undergo the ammoniacal changes. There are specimens of this urine on his table, which have retained their acidity for two or three weeks. This is not true of any other urine except that which contains sugar.

ERRATUM.—The last formula on page 431 should read:

R.—Ammoniae sesquicarb. gr. v.
Mist. Camphoræ, ℥iss.

EDITORIAL AND MISCELLANEOUS.

—An extremely interesting case of congenital fissure of the sternum, which offers a rare opportunity for an intimate study of the motions and sounds of the heart and lungs, has attracted the attention of the medical profession of this city during the last month. The case is one not unknown to the world of medical science, for it has been the subject of much discussion during the last few years in all the learned societies of Europe, and has been treated upon in most of the medical journals in the different cities of Great Britain and the Continent.

Mr. E. A. Groux, of Hamburgh, in whose person this almost unique conformation of parts is observed, has been examined by over 2000 physicians of the Old World, as the album which he carries attests. In it are found the autographs of the greater lights in our profession, from St. Petersburg to Madrid, and in many instances the detailed result of a critical examination is recorded.

We have been permitted to examine this album, and to transcribe some of these opinions. As this is an instance of a most rare anatomical disposition of parts, allowing an unusual facility for examining the phenomena presented by the heart during life, we consider every opinion upon the motions and the sounds of this organ, elicited by such a case, to be worthy of a more permanent record; we therefore, with M. Groux's permission, give here such of them as have not been already published.

Although this malformation is congenital, M. Groux was not aware of anything peculiar about it, till he was attacked by cholera, in 1849, when his attending physician detected it, and pointed it out to him. Since then it has been the subject of much scientific speculation, as the history of his presentations to the different societies and savans of all nations proves.

History furnishes but few instances of such a conformation of parts, and it is but recently that M. Groux, when on a visit to Edinburgh, found that his case was not unique.

Dr. J. Hughes Bennett, who presented him to the Medico-Chirurgical Society of that city, exhibited at the same time a pathological specimen he had taken a few years before from the body of a woman, in which the sternum was cleft; a margin of bone existing on each side, to which the ribs were attached by their cartilages. This condition of parts was not known until the post-mortem revealed it.

Harvey records the case of a young nobleman, in whose left side

there was an opening, permitting the introduction of the fingers, and the examination of the heart by sight and touch. This was, however, the result of an accident, the ribs having been fractured by a kick of a horse, the injury terminating in destruction of the soft parts by ulceration, and thus opening the cavity of the thorax.

Dr. Lyons, of Dublin, in his observations on the case of M. Groux, mentions a third case, which in some respects has a more striking similarity to the one now under consideration. It occurred in a boy fourteen years old, deformed, with a lateral curvature of the spine, and consequent deviation of the ribs, some of which were imperfect. The first rib was perfect, articulating with the sternum; the second terminated at the distance of two and a half inches from the sternum, and the third, fourth, and fifth at three inches, while the rest were joined together, forming a semi-lunar arch. In the space between the ends of the ribs and the sternum, on the left side, covered only by skin, could be seen the movements of the heart and the lung.

These are the only cases known bearing any resemblance to the singular condition of parts which are to be seen in the person of M. Groux.

M. G. is about 28 years old, small in stature, but well formed. The remarkable peculiarity in his case consists in a fissure, which extends the whole length of the sternum at the median line, dividing it into two lateral halves. This fissure is of a V shape, with irregular outlines, covered with skin, and perhaps some of the fasciæ of the thorax; having its base upwards and its apex at the ensiform cartilage, where the two halves are held tolerably firmly together by a strong ligamentous band. During natural respiration the fissure is depressed at variable depths, which can be increased by forced inspiration, giving it a concave appearance. The width of this fissure during quiet respiration is about one and a quarter inches at its upper boundary, an inch and a half upon a line with the third and fourth ribs, and a quarter of an inch at its apex. This width can be greatly diminished or increased at will by muscular effort. Through the action of the pectoral muscles, the hands joined together and pulling upon each other, the fissure is dilated to the width of about two inches and a half; while the hands being joined, and the effort being reversed—that is, pushing against each other—the fissure is lessened in width, can be closed entirely, and the edges be made to overlap even, through the influence of the deltoid and trapezii muscles. Forced expiration also increases this fissure, forced inspiration diminishes it.

Attentively examining this triangular space, a pulsating tumor is

seen about its middle, on a line with the fourth rib. This is the most apparent pulsation, but there are two others in an almost vertical line with it, the one above and the other below, which can be felt; the latter is to a certain degree visible.

The motions and sounds of the heart perceived and felt in this triangular space have been the subject of the various opinions we are to give, but before we do so we must refer to other phenomena presented by this singular case.

By forced expiration, M. Groux is able to produce a large bulging tumor in the upper portion of this fissure, which upon percussion gives the clear sound of lung. This is the upper and anterior margin of the right lung, which is forced from under the margin of the right half of the sternum to fill up the fissure, giving it a convex appearance. Coughing developes this the best.

Another curious phenomenon is the wonderful power possessed by M. Groux of instantly arresting the pulsation in the subclavian and radial arteries. This is accomplished during full inspiration, the breath being held for a few moments while the lungs are full. It is probable that the apices of the lungs press upon the subclavian arteries, and in this manner obstruct the circulation.

Still another experiment which is usually shown during the examination of this singular malformation is the enlargement of the pulsating tumor at the end of expiration, the lungs being completely exhausted, and the respiration suspended for a few moments. The tumor grows larger gradually, and the impulse of the heart is felt distinctly in the intercostal spaces of the third, fourth and fifth ribs. This is presumed to be owing to the distension of the heart by the blood during suspended respiration.

What is the pulsating tumor which is so apparent in the fissure? This is the mooted question. By some it is supposed to be the aorta, by others the right auricle, by others again the right ventricle, and by others still, the conus arteriosus or the arteria innominata.

Dr. Lombard, of Liege, who examined M. Groux in May, 1852, says, "The pulsations of the aorta were very distinct, and not synchronous with the auricle. The first were quite high, the second lower, and very visible to the eye."

Prof. Hamernik, of Prague, says, "The pulsating tumor is the right auricle, and not synchronous with the heart's apex."

Dr. Wilhelm Reil, of Halle, thus gives his opinion: "The tumor is the right auricle, because the dilatation is synchronous with the first

sound of the heart, the first sound of the aorta, and the first sound of the pulmonary artery, but the radialis was a moment later."

Prof. Baumgartner, of Fribourg: "The tumor is the right auricle, because only a body with transverse muscular fibres can produce this movement."

Prof. Forget, of Strasbourg: "It seems to me beyond question that the dilatable and pulsating tumor is the right auricle: 1. Because it occupies the position of the auricle; 2. Because it dilates to a considerable degree; 3. Because this tumor increases greatly in size when the subject separates the shoulders and suspends respiration; 4. Because behind and above this dilatation at the top of the sternum another synchronous pulsation is felt much more limited, much less expansive than the first, and which appears to me to be that of the aorta."

M. Jules Beclard writes in the *Gazette Hebdomadaire* of Paris: "The right auricle forms, in fact, across the soft parts a tumor, the maximum diminution of which is synchronous with the shock of the heart against the pectoral walls, and with the arterial pulse, consequently with the ventricular contraction. * * * It results from this examination that the shock of the heart is synchronous with the ventricular systole."

M. Aran, in his remarks before the Medical Society of the Hospitals of Paris, said, "It seems to me that there can be no doubt upon the point that it is the right auricle."

M. Bouillaud states: "Fissure of the sternum, permitting the aortic pulse to be felt. The pulsations that can be touched, that can be seen by means of this fissure, are synchronous with the pulsations of the carotid artery, the subclavian, radial, &c., and with the shock of the point of the heart. This organ is well formed, the beatings are regular, of ordinary force and extent, &c."

M. Piorry—"I have ascertained that the heart is twelve centimetres in width; that it is the right auricle which beats in the place where the sternum should be, &c."

M. Pouchet, Professor of Natural History in Rouen, says: "The pulsatile tumor can be only the right auricle. This is demonstrated by the region it occupies, by its movements of expansion, and by the considerable increase it undergoes during the act of coughing, and the suppression of the respiration—phenomena which could not be observed if it was the aorta."

The late *Dr. John Snow*, of London, stated that "the motion observable to the eye in the situation of the right auricle is occasioned by the closing of the tricuspid valves during the contraction of the

ventricles, which causes a momentary reflux or wave of blood into the auricle. I am of opinion that the proper contractions of the right auricle are not very apparent."

Dr. Geo. Burrows, Dr. Wm. Baly and Mr. James Paget, Physicians and Surgeon to St. Bartholomew's Hospital, London, in their opinion, state: "It seems to us most probable, that the pulse seen and felt between the separated portions of the sternum, is due to the contraction of the right ventricle, the heart being placed somewhere above and to the left of the normal position."

Dr. Ernst, of Zurich, says, in the Album, that the tumor is the right auricle, and he writes in Virchow's Archives—"It is clear that the part of the heart seen and felt contracts when it moves downwards. This motion is synchronous with the shock of the heart which is slightly felt between the fifth and sixth ribs."

Dr. Traube, of Berlin, says that the tumor is the right ventricle, because the position of the right auricle is more to the right of the median line of the sternum.

Prof. Virchow—"I think from vivisections and from anatomical and pathological specimens in which the mediastinum and the heart, in consequence of a diminution of the left pleura, are drawn more to the left side, are placed similarly to those in the case of M. Groux. Consequently I am obliged to believe that the pulsating tumor is a part of the right ventricle, in the greatest expansion of which the conus arteriosus joins."

M. Marc d'Espiné, of Geneva, concludes that the pulsations perceived in the middle of the sternal fissure arise from the beatings of the aorta; "considering, 1. That each pulsation which is observed in the sternal fissure follows so immediately each systolic shock of the heart, that these two movements seem synchronous. 2. That there is an interval of appreciable time between the pulsation medio-sternal which *precedes*, and that of the abdominal aorta which immediately follows. That there is too great a distance between the regions where the pulsations which we are considering are observed, and that where the ordinary beatings of the heart are observed, for the pulsations to be attributed to the systolic movement of the ventricles."

Dr. F. W. Pavy, of Guy's Hospital, writes in the Medical Times and Gazette, "The tumor occupying the position of the right auricle pulsates with the contraction of the ventricle and the production of the first sound of the heart. It rises rapidly and suddenly, and instantaneously afterwards falls with that peculiar thrill, wave or vermicular movement proceeding from above to below, which I pointed

out as, at this period of the heart's action, running through the parieties of the *auricle* of the dog. It then remains at rest until again disturbed by a fresh contraction of the ventricle. From the behavior of this pulsatile swelling, so precisely corresponding to the action of the auricle in the dog, there is not a shadow of doubt in my own mind of its being formed by this portion of the heart."

Dr. Lionel S. Beale says, "that the tumor consists partly of the right auricle and partly of the right ventricle."

Dr. Francis Sibson: "The pulsating tumor at the upper part of the fissure is the aorta, and during inspiration the aorta alone is felt; but during a prolonged expiration the right auricle ascends, and it is then seen to dilate during the ventricular systole, to contract during the ventricular diastole; in fact, then, the aorta may be felt pulsating at the upper part of the fissure, moving upwards and downwards, and the right auricle may be seen at the lower part of the fissure, moving from right to left, and *vice versa*. When M. Groux lies on the right side, I consider that the pulmonary artery presents itself, pulsating at the left side of the lower two-thirds of the fissure; when he lies on the left side, I consider that the right auricle presents itself to a greater extent than when he stands."

Dr. C. J. B. Williams has given a lengthy opinion, which we transcribe in full:

"MOTIONS.—That the *visible* pulsation in the middle third of the sternal vacuity is chiefly seated in the right auricle, appears to me obvious from its resemblance to the same motion observed in the exposed heart of the ass, and from the fact, distinctly perceptible in slow pulsations, that the motion immediately precedes the ventricular systole, the wave of motion beginning with the auricle and rapidly passing downwards to the ventricle. In quick pulsations, the motion of the auricle is felt in the sternal space, and the systole of the ventricle as felt and heard in its region seem to be synchronous; but, I repeat, in the more deliberate movement, when the pulse ranges about sixty-five in the minute, the wave-like progression can be traced from the auricle to the ventricle, the upper margin of which sometimes comes into view at the lower portion of the sternal vacuity. To the rapid systolic movement succeeds a slow *dilatation*; and that this proceeds from the flow of blood into the auricle from the venous trunks, is made more plain by the fact, that pressure on the abdomen, which forces the blood onwards through the ascending vena cava, accelerates the expansion of the auricle. The *aorta* can be felt pulsating, more deeply seated, above the position of the auricle; and a like pulsation of the

pulmonary artery may be felt through a portion of the auricle, close to the left margin of the fissure.

“SOUNDS.—The sounds accompanying the respective motions can also be distinguished with clearness only in the slow pulsations. By aid of a small flexible ear tube with a narrow pectoral end, I was enabled to hear a *distinct sound accompanying* the commencement of the auricular contraction. It is faint and short, or flapping, and ends in the less abrupt and more distinct sound of the ventricular systole. When the stethoscope is placed over the ventricle, the flapping sound of the auricle is not heard, but the ventricle swells or rolls out its peculiar sound, till it ends with the sharp clack of the diastolic or valvular sound. I infer from the preceding observation, (as well as from similar ones made twenty years ago on animals,) that each movement of the heart has its proper sound; and that the reason why the auricular sound is not usually heard, is that it is too faint to pass through the intervening lung and wall of the chest.

“The *diastolic valvular or second sound* is remarkable for its clearness and loudness in this case; and on one occasion I found it *reduplicated* or double; and I had the opportunity of verifying the explanation which I gave of this double diastolic sound more than twenty years ago. When the end of the stethoscope was placed over the aorta, above the auricle, the diastolic sound was simple; but on carrying the instrument a little downwards, and to the left, so as to cover a part of the pulmonary artery, the sound became double; the whole heart-sound being expressed by the syllables *lubb-durru*, instead of *lubb-dup* as usual, obviously from the two sets of valves closing in succession, not simultaneously. This want of coincidence in the closure of the aortic and pulmonary valves is only occasional, but as it often presents itself as a phenomenon of disease, it is satisfactory to be able thus to trace it to its cause.

“The only remaining observation which I have to record is that of a short rasping murmur, heard in the course of the right carotid artery, and which must be produced there, as it is not audible in the aorta or over the course of the innominate.”

Dr. C. Radcliffe Hall and others of Plymwood, Torquay, state: “The most prominent pulsation is occasioned by the right auricle. It seems to us that three distinct degrees of distance of sound, indicating as many distinct sources, may be made out from above downwards; the sound over the presumed auricle being far more superficial and bell-like than either the one above (aorta,) or the one below (right ventricle.)”

Dr. J. Hughes Bennett, Edinburgh: "Has no doubt that the pulsation above is that of the aorta, the prominent undulating one in the centre is that of the right auricle, and the inferior one observable on his taking a deep inspiration is that of the right ventricle."

Dr. W. T. Gairdner, of Edinburgh, also gives a lengthy opinion, which, as it has not been published, we give in full.

"The upper *visible* pulsation (A) is auricular; probably of the right auricular appendage.

"It precedes the arterial pulse which is felt above it by a very appreciable interval.

"It precedes the apex beat by an interval appreciable, but not so easily appreciable. Care must be taken to press lightly on the pulse A, in making this observation, otherwise the ventricle is felt pulsating below what I take to be the auricle, and is of course synchronous with the apex beat.

"It precedes the lower visible pulsation (B) by an appreciable interval. The only difficulty here arises from the fact that the movement is in opposite directions. B is rather a movement of retraction than a proper pulsation.

"The *pulsation A increases*, and the auricle *slowly fills under the eye* when M. Groux suspends respiration for a time. This phenomenon, like the welling of water into a basin which fills from below, can be easily distinguished from the protrusion of the lung which takes place when a sudden respiratory movement concurs with a closed glottis. When M. Groux coughs, the lung protrudes, but not the auricle; when he simply ceases to breathe for several seconds, without either expiring or inspiring, the auricle protrudes, but not the lung. Percussion also shows the difference between the two. This gradual filling of the right auricle when respiration is suspended, and the enlargement of its pulsations which follows, is quite in accordance with what is seen in vivisections, when partial asphyxia is gradually induced. In *forced* respiratory movement with the glottis closed, the protruded lung conceals the auricle, and interferes with the observation of its phenomena. In forced inspiration the heart is drawn back from the thoracic wall. The favorable state, therefore, for noticing the gradual filling of the auricle is intermediate.

"I presume the movement which I have called B (the lower visible pulsation) to be in connection with the systole of the right ventricle. It is only visible in full inspiration, because it requires the descent of the diaphragm to bring the heart down to the left costal margin, when this movement is observed, and it is a movement of retraction

because the systole of the ventricle withdraws it from the surface. A similar movement is occasionally seen in men perfectly well formed, perhaps not in perfect health, but without marked disease of heart.

“During suspended respiration the apex beat in the usual situation becomes indistinct, and may, perhaps, finally be lost, though I have generally found it continue. At the same time a movement becomes apparent in the third, and then in the second intercostal space. This phenomenon is very curious, and well worthy the attention of physiologists. It was attributed by some of those who observed it at the Medico-Chirurgical Society here, to be an actual displacement upwards of the apex. I am rather of the opinion that it is owing to the increasing distension of the right ventricle, which throws back the true apex of the heart from the thoracic walls.

“In the strictly normal condition of parts, the same change takes place, so far as the disappearance of the true apex beat is concerned; but I have not seen the pulsation higher up except in disease. In adherent pericardium, and even hypertrophy of the right ventricle, it is not unfrequent. In M. Groux, when the heart's action is excited, it can be easily felt on deep pressure in four intercostal spaces simultaneously.

“With regard to the reduplication of the first sound which I formerly noted, I am still of opinion that it probably contains an auricular element, and is dependent on the want of synchronism between the auricular and ventricular contractions. But we are too little sure of the causes of the first sound, to allow of our speculating on the matter.”

Dr. P. Redfern, of Aberdeen, says: “I conclude that at the upper part of the fissure the aorta, or one or more of its branches, may be felt; that the undulating tumor at about the middle of the sternum is the right auricle, and that the one less easily seen, lower down and to the left of the fissure, is the right ventricle.

“I believe that the pulsations of the tumor at the middle of the sternum take place first, and that they are then succeeded by the synchronous pulsations of the lower sternal tumor and of the apex.

“The lungs do not approach the middle line in inspiration in M. Groux's case, because of the absence of the sternum and the depression of this part of the thoracic wall at that time by the pressure of the atmosphere; the lung is forced through the fissure during expiration simply because this part of the wall is weaker than the rest. It is unsafe to draw any conclusion as to the production of emphysema from this case.

"I believe both sounds of the heart to be produced by valvular tension entirely. Unless the auricles throw the blood with force into the ventricles, the auriculo-ventricular valves could not prevent copious regurgitation. The contraction of the auricle throws the valves upwards indirectly, and *may at times* produce such tension in them as to cause the faint flapping sound which is continued and completed at the first sound by the further tension caused by the succeeding ventricular contraction. Hence the reduplication of the first sound at times heard in M. Groux's case, and in disease. Even in this case I see no good ground for concluding that either muscular contraction or any other cause than the valvular tension is concerned in the production of either of the heart's sounds."

Dr. Carlisle, of Belfast, writes thus: "I do not think this pulsation is caused by the right auricle, because the movements of the auricle, when viewed in the beating heart in animals of warm blood, are of a different character. In such, during the systole of the ventricles, the auricles become gradually distended with blood from the venous trunks, and just as the systole ends, a portion of the blood passes suddenly from the auricles into the ventricles, whereby the size of the former is slightly diminished, but no active contraction appears at that time to take place in the auricles, this being the period of repose of the heart. Immediately afterwards a slightly marked peristaltic motion across the auricles commences in the right auricle, at the orifices of the *venæ cavæ*. When this movement has reached the appendices, these suddenly contract and become flattened and somewhat hardened, and immediately afterwards the ventricles spring forward and assume the condition which denotes their systole. No movement takes place in either auricle which would cause the pulsation felt in the middle sternal region of M. Groux's case.

"I believe this pulsation to be that of the ascending aorta. If the fingers of one hand be placed along the surface of the seat of pulsation, in a line from above downwards, a single pulsation is felt by all the fingers so placed, extending from the lower to the upper boundary of the space as before described. If the ear be at the same time applied over the region of the apex and left side of the ventricular portion of the heart, the first sound and the impulse are found to be coincident with that pulsation, namely, with the augmentation in the size of the pulsating part, and the second sound coincident with the diminution in size and the receding under the fingers of the same part. If the radial artery be felt by the other hand, the pulsation above mentioned precedes the pulsation in the radial artery by an appre-

ciable interval. For these reasons I conclude that the pulsation in question is that of the ascending aorta. It is possible that, at the lower part, the pulmonary artery, which there lies in front of the aorta, may contribute to form the pulsation, but I was unable to discriminate between the pulsation of the pulmonary artery and that of the aorta."

Dr. Charles C. King, Professor of Anatomy and Physiology to Queen's College, Galway, Ireland, says: "I am of opinion that the undulating movement from above downwards and towards the left side, and which is observable in the centre of the sternal fissure, depends upon the contraction of the right auricle of the heart, and the pulsation inferiorly and to the left side is produced by the right ventricle; its direction is upwards and to the right side; the auricular pulsation immediately precedes the ventricular. Immediately above the auricle the beat of the aorta can be distinctly felt. On placing the extremity of a small stethoscope very gently on the auricle, a single sound is distinctly heard; on pressing more firmly, the auricle, or probably its appendix, yields, and the instrument comes into close relation with the origin of the pulmonary artery and aorta, and a double sound is heard. When the heart is beating quietly and slowly, a *double second* sound is perceptible. I attribute this to the flapping down of the pulmonic and aortic valves, not being perfectly synchronous."

Dr. Robert D. Lyons, of Dublin, Ireland, has, in a lengthy article which appeared in the *Atlantis* for July, 1858, analyzed all the motions and sounds of the heart observed in the case of M. Groux. The oval pulsating tumor he believes to be a part of the right auricle, having a single sound and a single impulse; another sound, deeper seated and double, is heard by pressing the stethoscope upon the walls over the auricle, which causes this part of the heart to recede; the first and single sound is superficial, and belongs to the auricle; the deeper seated are those of the pulmonary artery.

M. Groux has been presented to the Academy of Medicine, the Pathological Society, the German Medical Society, each of the Colleges, and to very many private societies in this city, in all of which the wonderful conformation of the thoracic walls, and the numerous experiments he shows to illustrate the sounds and motions of the heart and lungs, have elicited the greatest degree of interest.

— The sanitary condition of this city, and the best means of improving it, have, during the past month, attracted a great deal of attention

from the public as well as from the profession. The daily journals notice it, and the *Times* has printed a long and pretty well considered article upon the subject. Many prominent men of the profession have been before the Committee of the Senate of this State, to give their opinions of the necessity of a change in the sanitary officers of this city, while the officers who are now in power have endeavored to demonstrate to the Committee that it is entirely unnecessary to make any change. In fact, they affect to prove that a change would be for the worse, and so far as the condition of their own pockets is concerned we believe they are correct.

So much interest is excited in the subject that a meeting of medical men was called to express their opinions upon the subject, and it is said to have been the largest meeting of the profession ever held in New York. Entire unanimity marked all the opinions which were expressed by the speakers, and for once doctors did *not* disagree. Surely there must be some reason for all this commotion and excitement, which cannot reasonably be accounted for by the attraction of salary, or by the mere clannishness of professional men—to which sin, by the way, doctors are very little given.

Deny it who may, the truth is that the medical men of this city are convinced that New York ought to be, what it is not by any means, the healthiest city, of its size, in the world; and believing that the first step to make it approach nearer to what it should be is to place men of knowledge in such matters in power, they have determined to do all that they can to bring about such a change. It is worth while to notice, moreover, that of the two their interest lies in having things remain as they are; but with that large hearted benevolence, of which we believe the profession as a body can boast, they are struggling for the good of those who are ignorant of their danger, or opposed to their measures—for the good of thousands who are to be, as well as of those who now are, our citizens. And there certainly must be something wrong about our sanitary arrangements.

London, with the Thames turned into a great sewer, and flowing through its most crowded portions, sending up exhalations into the very Parliament House, which human nostrils cannot endure—London, with all this disadvantage added to its greater size, is to-day a more healthy city than New York. Everything shows that the methods which have been followed, and the men who have had charge of them, have failed to make this city what it can be made. Then let a change be tried. It cannot be any worse for the city or for its citizens. We risk nothing in saying it will be vastly better for both. But sitting

quietly in our editorial chair, away from the immediate excitement of the contest, we think we may see some things which are not so visible to those who are blinded by the dust of the conflict. And we would say to our brethren, be not given to exaggerate. *Ne quid nimis*. For the evils against which you would contend, and of which you complain, are real enough and terrible enough without referring to the imperfect ventilation of cars, and other little matters with which law cannot interfere, or which, when you speak of them with the same language that you use in speaking of great evils, lead to the suspicion that all your ideas are Utopian. It is not wise to talk too much. It is not in the multitude of words that wisdom is found.

To the Inspector and his adherents we beg leave to say, the profession do not insist upon Dr. Griscom's taking your office. It is not for him that all the commotion is made, and it is hardly worth your while to assail him. Dr. Griscom and Dr. McNulty have acted as a committee of the most prominent medical society in this city, in urging this upon our legislators, and are deserving of all the credit which they receive—and it is not little—for the energy and perseverance which they have shown. But it is not for their sakes that the profession meets. It has a stronger and more urgent motive—the good of their fellow citizens. We do not deny that you are very clever men in your way, but the education of the Herald office evidently has not fitted you for taking care of the public health. Many lives have been sacrificed to your system, and you must not wonder that physicians, seeing this, feel it to be their duty to endeavor to overthrow that system.

To our readers away from this city, but in the state, of whom we have many, we have a favor to ask, not for ourselves, but for humanity. Make it a point of honor, brethren, each and all of you, to see your representatives in the Assembly and in the Senate, and enlighten them upon the wishes and aims of the profession in this city, and their reasons for urging the change in sanitary matters here. It will then be free from party prejudices in their minds; they will see the important bearing of the bill, and when it comes up for their consideration they will be ready to enter upon it with intelligence; they will see why all the state has an interest in it, and we doubt not will be inclined to press it through to make it a law. Brethren, we appeal to your kind feelings—we appeal to your humanity, and urge you by the value of hundreds of lives placed in peril, to come up thus practically and efficiently to our help. Let not the Juggernaut of official imbecility and incompetence longer crush us beneath its horrid wheels.

— At the regular meeting of the Academy of Medicine, Nov. 3, *Dr. J. W. Corson* read a paper on the Position of the Shoulders in Chest Examinations, and *Dr. Samuel Rotton* read a minority report on Fluid Extracts.

The Annual Discourse before the Academy was delivered this year on the evening of the 25th of November, by *Prof. E. R. Peaslee*. The subject of the discourse was "The Progress and the Spirit of Medical Science." This address will undoubtedly be published by the Academy, when we will take the opportunity of presenting a portion of it to our readers.

— Some months since a Special Committee of the Board of Councilmen of this city was appointed for the purpose of considering and reporting upon the propriety of establishing in this city a Foundling Hospital. This Committee has recently reported in favor of an Infant's Home, serving all the purposes of a Foundling Hospital. It still needs the assent of the other branches of our city government before it can become a permanent institution.

From a letter by *BAYARD TAYLOR*, in the *Tribune*, we extract the following account of the Foundling Hospital in Moscow:

In Russia, the Foundling Hospital is characterized by some peculiar and very interesting features, which deserve to be generally known, as they are intimately connected with one of those tender moral questions our civilization is afraid to handle.

In every general view of Moscow, the eye is struck by an immense quadrangular building, or collection of buildings, on the northern bank of the Moskoa, directly east of the Kremlin. The white front towers high over all the neighboring part of the city, and quite eclipses, in its imposing appearance, every palace, church, military barrack or other public building whatever. It cannot be much less than a thousand feet in length, and at a venture, I should estimate its size at three times that of the Capitol at Washington. The Governorship of this institution is only second in importance to that of the city itself, and is always conferred upon a nobleman of distinguished rank and attainments. The importance of the post may be estimated when I state that the annual expenses of the hospital amount to \$5,000,000. A portion of the government revenues are set aside for this purpose, in addition to which successive Tzars, as well as private individuals, have richly endowed it. The entire property devoted to the support, maintenance and education of foundlings in Russia is said to amount to the enormous sum of five hundred millions of dollars.

This stupendous institution was founded by Catharine II., immediately after her accession to the throne in 1762. Eight years afterward she established a branch at St. Petersburg, which has now outgrown the parent concern, and is conducted on a still more magnificent scale. The original design appears to have been to furnish an

asylum for illegitimate children and destitute orphans. A lying-in hospital was connected with it, so that nothing might be left undone to suppress crime and misery in a humane and charitable way. The plan, however, was soon enlarged so as to embrace *all* children who might be offered, without question or stipulation—the parents naturally giving up their offspring to the service of the government which had reared them. Russia offers herself as midwife, wet nurse, mother and teacher to every new soul for whom there is no place among the homes of her people, and nobly and conscientiously does she discharge her self-imposed duty. She not only takes no life, (capital punishment, I believe, does not exist,) but she saves thousands annually. She, therefore, autocracy as she is, practically carries into effect one of the first articles of the ultra-socialistic code.

Through Col. Claxton's kindness, I obtained permission to visit the Foundling Hospital. We were received by the Superintendent, a lively, intelligent gentleman, with half a dozen orders at his button-hole. Before conducting us through the building, he stated that we would see it to less advantage than usual, all the children being in the country for the summer, with the exception of those which had been received during the last few weeks. There is a large village about thirty versts from Moscow, whose inhabitants devote themselves entirely to the bringing up of these foundlings. We first entered a wing of the building, appropriated to the orphan children of officers. There are 1,200 at present in the institution, but all of them, with the exception of the sucklings, were enjoying their summer holidays in the country. It was the hour for their midday nap, and in the large airy halls lay a hundred and fifty babes, each in its little white cot, covered with curtains of fine gauze. Only one whimpered a little; all the others slept quietly. The apartments were in the highest possible state of neatness, and the nurses, who stood silently, with hands folded on their breasts, bowing as we passed, were also remarkably neat in person.

These children enjoy some privileges over the foundlings and poorer orphans. The boys are taught some practical science or profession, and not unfrequently receive places as officers in the army. The girls receive an excellent education, including music and modern languages, and become teachers or governesses. As the larger children were all absent, I could form no idea of the manner of their instruction, except from an inspection of the school and class rooms, the appearance of which gave a good report. The Superintendents and Teachers are particularly required to watch the signs of any decided talent in the children, and where such appears to develop it in the proper direction. Thus, excellent musicians, actors, painters, engineers, and mechanics of various kinds have been produced, and the poor and nameless children of Russia have risen to wealth and distinction.

On our way to the hospital proper, we passed through the church, which is as cheerful and beautiful a place of devotion as I have seen since leaving the Parthenon. The walls are of scagliola, peach-blossom color, brightened, but not overloaded with golden ornaments. The dome, well painted in fresco, rests on pillars of the same material, and

the hall altar-screen, though gilded, is not glaring; nor are the Saints abnormal creatures, whose like is not to be found in heaven or on earth. The *prestol* or inmost shrine stands under a dome whose inner side contains a choral circle of lovely blonde-haired angels, floating in a blue, starry sky. All parts of the vast building are most substantially and carefully constructed. The walls are of brick or stone, the floors of marble or glazed tiles in the corridors, and the staircases of iron. The courts inclose garden-plots radiant with flowers. The arrangements for heating and ventilation are admirable. With such care, one would think that a naturally healthy child would be as sure to live as a sound egg to be hatched in the Egyptian ovens.

We passed through hall after hall filled with rows of little white cots, beside each of which stood a nurse, either watching her sleeping charge, or gently rocking it in her arms. Twelve hundred nurses and twelve hundred babies! This is homoculture on a large scale. Not all the plants would thrive; some helpless little ones would perhaps that day give up the unequal struggle, and before men and women are produced from the crop there sown, the number will be diminished by one-third. The condition in which they arrive, often brought from a long distance in rough weather, accounts for the mortality. When we consider, however, that the deaths both in Moscow and St. Petersburg annually exceed the births, it is evident that the Government takes better care of its children than do the parents themselves. Of the babies we saw, seven had been brought in on the day of our visit, up to the time of our arrival, and fourteen the previous day. The nurses were stout, healthy, ugly women, varying from twenty to forty years of age. They all wore the national costume—a dress bordered with scarlet, white apron, and a large fan-shaped head-dress of white and red. In every hall there was a lady-like, intelligent overseeress. In spite of the multitude of babies, there was very little noise, and the most nervous old bachelor might have gone the round without once having his teeth set on edge.

The Superintendent then conducted us to the office or agency, on the lower story, where the children are received. The number of clerks and desks, and the library of records, showed the extent of the business done. I looked over a report of the operations of the institution from its foundation to the present time. The number of children confided to its care has increased from a few hundred in 1762 to 14,000 in 1857. Since the commencement of this year (Jan. 13, O. S.,) 6,032 have arrived. The entire number received in ninety-six years is 330,000, to which may be added 60,000 more, born in the lying-in hospital during the same period—making 390,000 in all. The Petersburg branch affords still larger returns, so that at present 30,000 children are annually given into the care of the Government. A very large proportion of them are the offspring of poor married people, in all parts of the country. As the children may afterward be reclaimed, on certain conditions, and are in any case assured of as fortunate a lot, at least, as would have been theirs at home, the parents are the more easily led to take advantage of this charity. The child is taken without question, and therefore no reliable statistics of the public morality can be obtained from this source.

The office is kept open night and day, and no living child which is offered can be refused. The only question asked is, whether it has been baptized. If not, the ceremony is immediately performed in an adjoining room, by a priest connected with the institution, one of the oldest nurses generally acting as godmother. Its name and number are then entered in the official book; a card containing them and the date of its arrival is attached to its neck, and another given to the mother, so that it may afterward be identified and reclaimed. Very frequently the mother is allowed to become its nurse, in which case she receives pay like the other nurses. After six weeks or two months in the institution it is sent into the country, where it remains until old enough to receive instruction. The regular nurses are paid at the rate of about \$50 a year, in addition to their board and lodging. If the parents pay a sum equal to \$25 on the deposition of the infant, they are entitled to have it brought up exclusively within the walls of the institution, where it is more carefully attended to than elsewhere. The payment of \$200 procures for it, if a boy, the rank of an officer. The parents are allowed to see their children at stated times, and many of them take advantage of this permission. The greater part, however, live in the provinces, and virtually give up their children to the State; though it is always possible, by consulting the hospital directory, to find where the latter are, and to recover them.

In the lying-in hospital all women are received who apply. They are allowed to enter one month before their confinement, and to remain afterward until their health is entirely restored. Those who wish to be unknown, are concealed by a curtain, which falls across the middle of the bed, so that their faces are never seen. Besides this, no one is allowed to enter the hospital, except the persons actually employed within it. The late Emperor, even, respected its privacy, and at once gave up his desire to enter, on the representations of the Governor. The arrangements are said to be so excellent, that not only poor married women, but many who are quite above the necessity of such a charity, take advantage of it. In this case, also, the number of children brought forth is no evidence as to the proportion of illegitimate births. It is not obligatory upon the mother to leave her child in the hospital; she may take it with her, if she chooses, but it will of course be received, if offered.

Besides the soldiers, common mechanics and factory girls, which the children of merely ordinary capacity become, the Government has, of late years, established many of them as farmers and colonists on the uncultivated crown lands. They are mated, married, and comfortably settled in villages, where, in addition to their agricultural labors, they frequently take charge of a younger generation of foundlings. I have seen some of these villages, where the houses were all neat Swiss cottages, under the projecting eaves of which the families sat in the mild evening air, while groups of sprightly children, too nearly of an age to belong to the occupants, sported before them. The people looked happy and prosperous. If there is a patriotic peasantry on earth, they should certainly belong to it. They are, in the fullest sense of the term, children of their country.

The St. Petersburg Hospital, though in the heart of the city, covers, with its dependencies, twenty-eight acres of ground. Upwards of five hundred teachers are employed, many of them on very high salaries. The number of nurses, servants, and other persons employed in the establishment, amounts to upward of five thousand. The boys and girls, both here and in Moscow, are taught separately. The cost of their education, alone, is more than \$1,000,000 annually. In a word, Russia spends on her orphans and castaways as much as the entire revenues of Sweden, Norway and Greece.

—*Diphtheria*: Discussion before the Medical Society of London. Oct. 18. Dr. SEMPLE called the attention of the Society to a disease which was exciting very great interest at the present moment—namely, Diphtheria. He had been called down to Bagshot to see some cases of the affection in question, but he arrived about an hour after one of the patients had died; he found that the last fatal case was the third in the same family, the ages of the patients being respectively eight, twelve, and fifteen years. They died at intervals of about a week from each other; and while the funeral service was being performed on one of the children, the death of the elder sister, aged fifteen years, occurred. Dr. Semple, however, repaired to the house of the patient, in company with Dr. Blount of Bagshot, and obtained permission to make a post-mortem examination of the body, although to a limited extent. It was to be regretted that very few examinations after death had been obtained in this disease, owing to the prejudices existing in the minds of relatives, especially in the rural districts. However, nearly the whole of the diseased parts were examined, consisting of the tonsils, a part of the tongue and of the pharynx, the epiglottis, the larynx, and the trachea. On the whole of these parts the pellicular membrane, which is the characteristic feature of true diphtheria, was developed. It was especially necessary to bear this character in mind, because he (Dr. Semple) had reason to believe that, at the present time, many affections of the throat were confounded together, under the name of diphtheria, which had very little relation to that disease—at least in the sense in which the term was used by Bretonneau, Trousseau, Guersent, and other French writers. It was especially necessary to exclude the scarlatinal sore throats from the category of diphtheria, because scarlatina has no real or necessary connection with the diphtheric epidemic. Other cases which were confounded with diphtheria were ulcerated sore throats of various kinds, cancrum oris, and even common tonsillitis. The true distinction existing between diphtheria and the malignant ulceration of the tonsils in scarlatina, was to be found in the circumstance that the pellicular exudation in diphtheria may be readily removed by the handle of the scalpel, leaving the mucous membrane below it, congested indeed, but smooth and entire; whereas, in the malignant ulceration of scarlatina, the substance of the tonsils is actually eaten away and destroyed. The fatality of diphtheria was quite appalling. Dr. Blount had attended eight cases of the disease in the vicinity of Bagshot, and every one of them had been fatal. Both the com-

mencement and the termination of the disease were marked by peculiarly treacherous and insidious characters: the symptoms, at first, are so slight, that they are hardly noticed by the patients or their relatives; and when medical advice is at last sought for, the pellicular exudation has generally reached the air passages, when the hopes of recovery are almost extinguished. The termination of the disease is equally insidious, and is often quite unexpected; for although many patients die with symptoms of well-marked asphyxia, yet others perish suddenly by syncope, while they appear to be going on favorably. Dr. Semple was remarkably struck with the circumstance that the locality, where these fatal cases occurred, was not one where one might expect, *à priori*, a malignant and fatal form of disease to prevail; for the surrounding country was open and beautiful, the soil dry, and the patients by no means placed in unfavorable hygienic conditions; nor did it seem that the disease attacked ill-fed or puny children, for the girl, whose body was examined, was a plump, well-formed person, moderately fat, and with good muscular development. The therapeutical management of this disease was a question of great importance; but, hitherto, all kinds of treatment had been attended with very unsatisfactory results; the best treatment was, unquestionably, the application of strong caustics to the throat, at the very earliest possible period; and the hydrochloric acid, used in a concentrated form, was perhaps the best. This appears to stop the progress of the false membrane into the air passages, and acts somewhat in the same manner as concentrated nitric acid in preventing the progress of phagedænic ulceration. When the false membrane has reached the trachea and bronchi, there is very little hope for the patient. The next question is whether, when this extension has taken place, the operation of tracheotomy—so much extolled and so extensively practised by the French physicians—ought to be resorted to. In the case of the girl at Bagshot, Dr. Semple was prepared to recommend the performance of the operation, if he found the patient alive, and if she were suffering from the symptoms of asphyxia; but the post-mortem examination proved that this proceeding must have been useless, for the false membrane was so extensively spread over all the air passages that it could not have been removed, and it had so little tenacity that it would have broken under the forceps used for extracting it. True diphtheria, therefore, was characterized by the presence of the false membrane at the back of the mouth, extending, in the fatal cases, into the air passages, and causing death by obstructing the respiration; and it differed, on the one hand, from those sthenic forms of throat disease which were accompanied by full pulse, and the other ordinary signs of acute inflammation; and, on the other hand, it differed from those low forms of throat-disease which arose from a depressed habit of body, from unclean and unhealthy habitations, and from the complication of scarlatina. The extensive prevalence of diphtheria, at the present day, demanded the attention of the Government; it was sweeping off great numbers of the rural population, both young children and persons verging on puberty; and, from the peculiarly insidious nature of the early symp-

toms, it was generally neglected until remedial means were of no avail.

Dr. Stavely King doubted the propriety of tracheotomy in this disease. He thought the patient would die of exhaustion under the knife. Many cases of so-called diphtheria were merely cases of common throat affection; such as, on the one hand, was low form of angina in scarlet fever, and, on the other, sthenic croupal inflammation. He related some cases of diphtheria, which had come under his observation, in which the early symptoms were very obscure. In his opinion, the disease was to the respiratory membrane what thrush was to the intestinal. He believed it had a confervoid origin, and that the effect of the poison, when absorbed, was, in its elimination, to set up a sthenic inflammation simulating croup. Hence his treatment, in the cases referred to, consisted in the employment of powerful counter-irritation, the application of a leech to each side of the trachea, chlorine washes, and the administration of port wine, quinine, and chlorate of potash.

Mr. Streeter thought the disease was essentially allied to croup, and advocated the use of emetics.—*Lancet*.

Syphilis.—Curative Treatment by Vaccine Virus.

M. Justin Lukomski, Lieutenant-Captain of the Forestiers in the service of Russia, has just addressed to all the organs of the medical press a communication on the anti-syphilitic action of the vaccine virus. Syphilis, says the Author, may be cured by vaccination; but in rare cases, when the disease is very mild and still more or less recent, is a single vaccination sufficient. Usually, several successive vaccinations, 5, 6, 8, 10, 12, are required; and ten or twelve punctures each time. The interval which M. Lukomski allows to elapse between two vaccinations is a week. The number of punctures at each vaccination necessarily depends on the quantity of virus at one's disposal; but there is reason to believe that the result is satisfactory in proportion to the number of punctures and the quantity of virus deposited. It must be added that success depends also on the freshness, the energy—in a word, the goodness of the vaccine-matter. Under the influence of this agent, when it is effective, and well applied, all the symptoms of primary and constitutional syphilis soon disappear; urethritis and vaginitis, chancre, bubo, excrescences and vegetations, pustules, papulæ, and, in general, all varieties of syphilitic eruptions. Of all these symptoms, excrescences and vegetations pass away the most quickly; pustules and papulæ are the last to disappear; in all cases, vaccination suffices without any auxiliary means of treatment, without internal or external remedies, without lotions or regimen. M. Lukomski acknowledges that the novelty of the method does not permit the surgeon to ascertain whether the syphilitic virus is entirely neutralized by this treatment, or whether the symptoms will reappear at a later period. Experience alone will decide this question; but what ought to induce a trial of this singular treatment just described is, that it has already rendered unquestionable services, and that it is not open to any of the reproaches with which syphilization has been assailed.—*Journal of Practical Medicine and Surgery*.

